THE DEVELOPMENT AND VALIDATION OF A HIGH PERFORMANCE MODEL WITHIN AN IT ORGANISATION

by

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DECLARATION

Student Number: 55363962

I hereby declare that "**The development and validation of a high performance model within an IT organisation**" is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

_____ _____

SIGNATURE DATE

Anize van Zyl

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SUMMARY

THE DEVELOPMENT AND VALIDATION OF A HIGH PERFORMANCE MODEL WITHIN AN IT ORGANISATION

By

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How does an organisation turn good results into great results? What makes one organisation good and another great? What defines high performance organisations? Which aspects within an organisation play vital roles into taking an organisation from good to great? Are some aspects more important than others, if so, which ones? These questions have been explored and researched over the years and various researchers have proposed different theories and models that impact high performance as well as definitions around high performance with mixed results.

The general aim of this research was to develop and validate a High Performance Model for an IT organisation. The concept of high performance was explored in terms of how to define high performance, which high performance models and frameworks have been developed within the literature and what sustains high performance. These existing High Performance Organisation (HPO) models and frameworks were evaluated against an identified set of criteria to arrive at a definitive theoretical model of high performance. The theoretical HPO model was developed based on the evaluation of the literature reviews together with the existing HPO model of the participating IT organisation.

The main purpose of the empirical research was to gather data by means of three questionnaires, over six years, which were used to statistically determine the organisational and behavioural constructs that influence High Performance in an IT organisation in South Africa. Furthermore, the researcher developed an empirical model to verify the theoretical model. A quantitative empirical research paradigm using the survey method was followed and explanatory and descriptive research was used in this study. An HPO questionnaire was developed and administered to employees. Over the six years and three questionnaire administrations, 3,451 employees participated.

A new best fitting HPO model was postulated based on new constructs postulated in the factor analysis. The model indicated that Leadership, Knowledge Management – team, Strategic Focus as well as Job Satisfaction especially contributed to high performance within the participating organisation, as well as that strong relationships exist between the HPO factors.

This research should contribute towards longitudinal studies on high performance as well as a comprehensive understanding of the factors that influence high performance, within South Africa but also globally. The new HPO model should assist organisations and practitioners in measuring high performance in any organisation after validation. With increased competition and globalisation organisations struggle to survive, this study can provide a roadmap for organisations to obtain and sustain high performance.

KEY TERMS: *High performance organisations, high performance frameworks/models, state-owned entity, information technology, exploratory factor analysis, confirmatory factor analysis, leadership, knowledge management, strategic focus, job satisfaction.*

Note: APA 6 guidelines were applied in the thesis.

ABSTRAK

Hoe kan ‘n organisasie goeie resultate in uitnemende resultate verander? Wat maak een organisasie goed en ‘n ander een uitnemend? Hoe word hoë prestasie organisasies gedefinieer? Watter aspekte binne ‘n organisasie speel die belangrikste rol om die organisasie van goed na uitnemend te neem? Is sommige aspekte belangriker as ander, indien wel, watter? Hierdie vrae is al deur die jare heen ondersoek en nagevors. Verskeie navorsers het verskillende definisies, teorieë en modelle wat hoe prestasie beïnvloed word ontwikkel, met gemengde resultate.

Die algemene doel van hierdie navorsing was om ‘n Hoë Prestasie (HP) Model vir ‘n IT organisasie te ontwikkel en te bekragtig. Die konsep van hoë prestasie word ondersoek, meer spesifiek, die definisie van hoë prestasie, watter hoë prestasie modelle en raamwerke al ontwikkel is in die literatuur en wat hou hoë prestasie in stand. Die bestaande HP modelle en raamwerke word ge-evalueer teen kriteria wat vooraf geïdentifiseer is om sodoende ‘n beslissende teoretiese model vir hoë prestasie te onwikkel. Die teoretiese HP model was ontwikkel op grond van literatuur evaluasies, tesame met die bestaande HP model van die deelnemende IT organisasie.

Die hoofdoel van die empiriese navorsing was om data te versamel deur middel van drie vraelyste, oor ‘n tydperk van ses jaar, wat gebruik is om te bepaal watter organisasie- en gedragsveranderlikes beïnvloed hoë prestasie in die deelnemende Suid-Afrikaanse IT organisasie. Die navorser het ook ‘n empiriese model ontwikkel om die teoretiese model te verifieer. ‘n Kwantitatiewe empiriese navorsingsparadigma, insluitend die vraelysmetode, was gevolg in hierdie navorsingstudie, sowel as verklarende en bevestigende navorsing. ‘n HP vraelys was ontwikkel en geadministreer. Gedurende die ses jaar en drie vraelys administrasies, het 3,451 werknemers deelgeneem.

‘n Nuwe en beter-passende HP model word gepostuleer, gebaseer op nuwe konstrukte gepostuleer in die faktoranalise. Die model wys dat Leierskap, Kennisbestuur—span,

Strategiese Fokus, asook Werksbevrediging—veral bydra tot hoë prestasie in die deelnemende organisasie en dat sterk verhoudings bestaan tussen dié HP faktore.

Die navorsing behoort by te dra tot longutidinale studies van hoë prestasie, asook ‘n omvattende begrip van die faktore wat hoë prestasie beïnvloed, op globale vlak, maar ook binne die Suid-Afrikaanse konteks. Die nuwe HP model behoort organisasies en praktisyns te help om hoë prestasie te meet in enige IT organisasie, nadat bekragtiging gedoen is. Met toenemende kompetisie en globalisering, sukkel organisasies om kop bo water te hou, dus kan hierdie studie ‘n padkaart bied na die verkryging en handhawing van hoë prestasie.

HOOF TERME: *hoë prestasie organisasies, hoë prestasie raamwerke/modelle, staatsbesitte entiteite, inligtingstegnologie, verklarende faktoranalise, bevestigende faktoranalise, leierskap, kennisbestuur, strategiese fokus, werksbevrediging.*

ISIFINYEZO ESIQUKETHE UMONGO WOCWANINGO

Ngabe inhlangano ikwenza kanjani ukwenza ukusuka kwimiphumela emihle ibe nemiphumela yezinga eliphezulu kakhulu? Ngabe yini okwenza ukuthi inhlangano ethile ibe yinhle kanti enye ibe sezingeni eliphezulu kakhulu? Ngabe yini okuchaza inhlangano esebenza ngezinga eliphezulu kakhulu? Ngabe yiziphi izinto kwinhlangano ezidlala indima ebalulekile ekwenzeni ukuthi inhlangano isuke ezingeni elihle iye kweliphezulu kakhulu? Ngabe kukhona izinto ezibalulekile ukudlula ezinye, uma zikhona, ngabe yiziphi? Le mibuzo iye yacutshungulwa nokucwaningwa eminyakeni emininginingi kanti abacwaningi abehlukene baphakamise amathiyori ehlukene kanye namamodeli athinta umphumela wezinga eliphezulu kanye nezincazelo ngokusebenza kwezinga eliphezulu, ngemiphumela ehlukene.

Inhloso enabile yalolu cwaningo bekuwukwenza kanye nokuqinisekisa imodeli ye-high performance model (HPO) ngokwenhlangano ye-Information Technology (IT). Kuye kwahlolisiswa umbono wokusebenza ngezinga eliphezulu ngokulandela indlela yokuchaza ukusebenza ngezinga eliphezulu, nokuthi ngabe yiwaphi amamodeli okusebenza ngezinga eliphezulu nezinhlaka ezenziwe ngaphansi kwemibhalo, kanye nokuthi yini ukuqikelela ukuqhubeka kokusebenza ngezinga eliphezulu. Amamodeli akhona e-HPO kanye nezinhlaka zahlolwa ngaphansi kwama-criteria aboniwe akhona ukuze kufinyelelwe kwithiyori echazayo ngemodeli yokusebenza ngezinga eliphezulu. Ithiyori yemodeli ye-HPO yenziwe ngokulandela uhlolo lwemibhalo ebuyekeziwe kanye nokulandela imodeli ye-HPO ekhona kwinhlangano ye-IT ebingenele ucwaningo.

Inhloso enkulu yocwaningo olunobufakazi bekuwukuqoqa idata ngokwenza uhla lwemibuzo emithathu, esikhathini seminyaka eyisithupha, kanti yasetshenziswa ukunquma ngezinto ezihlukene eziphathelene nenhlangano kanye nokuziphatha kwayo okunomthelela ekusebenzeni ngezinga eliphezulu kwinhlangano ye-IT eNingizimu Afrika. Kanti futhi, umcwaningi wenze imodeli yobufakazi ukuqinisekisa imodeli yethiyori. Kulandelwe ipharadayimi yocwaningo lwamanani ngokusebenzisa inqubo ye-survey kanye nocwaningo lwencazelo nengcaciso okusetshenziswe kulolu cwaningo. Kwenziwe uhla lwemibuzo ye-HPO yasetshenziswa kubasebenzi. Eminyakeni eyisithupha kusetshenziwswe uhla oluthathu lwemibuzo, kubasebenzi ababambe iqhaza abangu 3, 451.

Imodeli engcono kakhulu ye-HPO iye yasetshenziswa ngokulandela uhlelo olusha olwenziwe kwinqubo yohlaziyo. Imodeli ibonise ukuthi Ubuholi, kanye Nokuphathwa koLwazi – ithimba, Ukugxilisa kwinhloso ethile kanye Nokuneliseka Ngomsebenzi ikakhulukazi yikho okunomthelela ekusebenzeni ngezinga eliphezulu enhlanganweni ebamba iqhaza. Imiphumela ibonise nobudlelwane obukhulu obuqinile obukhona phakathi kwezinto eziphathelene ne-HPO, ikakhulukazi phakathi Kwenhlangano Yokuphathwa Kolwazi, okuhambelane kakhulu ngokuqinile nezinto ezinhlano kweziyisishagalolunye eziphathelene ne-HPO.

Ucwaningo lungathela esivivaneni ekuqondisiseni okujulile kwizinto ezinomthelela ekusebenzeni ngezinga eliphezulu, kuwo wonke umhlaba kanye neNingizimu Afrika ngokwayo. Imodeli entsha ye-HPO ingasiza inhlangano kanye nabasebenzi ekukaleni ukusebenza ngezinga eliphezulu kunoma yiyiphi inhlangano ye-IT, ngemuva kokuqinisekiswa. Ngokukhula kokuqhudelana kanye ne-globalisation, izinhlangano zikuthola kunzima ukuqhubekela phambili, lolu cwaningo lungahlinzeka ngomhlahlandlela kwizinhlangano ukuthola indlela yokusebenza ngezinga eliphezulu nokugcina lezo zindlela zokusebenza ngezinga eliphezulu.

AMATHEMU ABALULEKILE: *High performance organisations (izinhlangano ezisebenza ngezinga eliiphezulu), high performance frameworks/models (izinhlaka/amamodeli okusebenza ngezinga eliphezulu), state-owned entity (izinhlangano umnikazi wazo onguhulumeni), information technology, exploratory factor analysis, confirmatory factor analysis, leadership (ubuholi), knowledge management (ukuphathwa kolwazi), strategic focus, job satisfaction (ukuneliseka emsebenzini).*

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CHAPTER 1: SCIENTIFIC ORIENTATION TO THE RESEARCH

The questions may be the same, but the answers will be different – Albert Einstein

1.1 INTRODUCTION

This research study focuses on the development and validation of a high performance model within an IT organisation.

Chapter 1 provides an overview of the background and rationale of the research. It also describes the problem statement that will be the focus of discussion in the study. Furthermore, it identifies the general aim for the study, the aims for the literature review, as well as the specific aims for the empirical study. The statement of significance is discussed as well as the paradigm perspectives. The chapter continues to describe the research design, research approach, and the research method. Ethical considerations are discussed and finally, the chapter concludes with the chapter layout.

1.2 BACKGROUND TO AND RATIONALE FOR RESEARCH

Collins (2001) contended that organisations can develop from good to great in the most unlikely of situations. He provided the following examples of organisations which developed from good to great:

Table 1.1

Organisation development from good to great (Collins, 2001, p. 229)

Company	Results from Transition Point to 15 Years Beyond Transition Point*	T Year To T Year + 15
Abbott	3.98 times the market	1974-1989
Circuit City	18.50 times the market	1982-1997
Fannie Mae	7.56 times the market	1984-1999
Gillette	7.39 times the market	1980-1995
Kimberley-Clark	3.42 times the market	1972-1987
Kroger	4.17 times the market	1973-1988
Nucor	5.16 times the market	1975-1990
Phillip Morris	7.06 times the market	1964-1979
Pitney Bowes	7.16 times the market	1973-1988
Walgreens	7.34 times the market	1975-1990
Wells Fargo	3.99 times the market	1983-1998
Ratio of cumulative stock returns relative to the general stock market.		

Table 1.1 shows 11 organisations that made the leap from no-better-than-average results to great results. After making the leap, an organisation had to generate cumulative stock returns that exceeded the general stock market by at least three times over 15 years. The leap had to be independent of its industry. Collins (2001) found that the 11 good-to-great organisations averaged returns of 6.9 times greater than the market's – this is more than twice the performance rate achieved by the legendary Jack Welch in General Electric. Kroger Co. – a grocery chain – was an average performer for 80 years. By some means it broke free from its mediocrity to beat the stock market by 4.16 over the next 15 years. The chain went even further, from 1973 to 1998; it outperformed the market by 10 times (Collins, 2001).

Over the last three decades, a variety of management theories have been scrutinized in the desperate search for the blueprint for sustainable business success. In the 1970s theories and management tools around strategic planning, value chain, matrix management, and participative management were deemed important. This was followed in the 1980s by the excellence and entrepreneurship theories and the focus on leadership and customer service. In the 1990s the learning organisation, re-engineering, core competency, systems thinking, agile

company, and empowerment theories were at the order of the day (Holbeche, 2005; Mische, 2001).

Mische (2001, p. 6) asked the following important questions:

- *"Why were about a third of the Fortune 500 companies in 1970 no longer listed in 1983?*
- *Why do only three of the top 10 companies in the world in 1972 remain in the top 10 today?"*

Mische (2001, p. 6) goes even further to ask: *"How did tiny Dell and Gateway grow from the obscurities of a cottage operation in a dormitory room and cornfield to outperform mighty IBM, NEC, and Toshiba as the leading PC technology providers in the world?"*

Mische (2001) believed fundamental changes are driving new business dynamics. The Industrial Model (1900-1985) was focused on vertical integration, first-mover advantage, achieving critical mass and economies of scale, competition on cost, price and locations, sell-in/push-through marketing, information was important, as well as well-defined industry boundaries, and predictable dynamics (see Figure 1.1). In comparison to this, the High Performance Model (2000+) focuses on disaggregation – outsourcing and collaborative partnerships, competing on speed, excellence and agility, as well as process and service, sell-through/pull-through marketing, knowledge being strategic, as well as uncertainty at the order of the day as industry structures are blurred and uncertainties prevail. This can be illustrated as follows (Mische, 2001, p. 10):

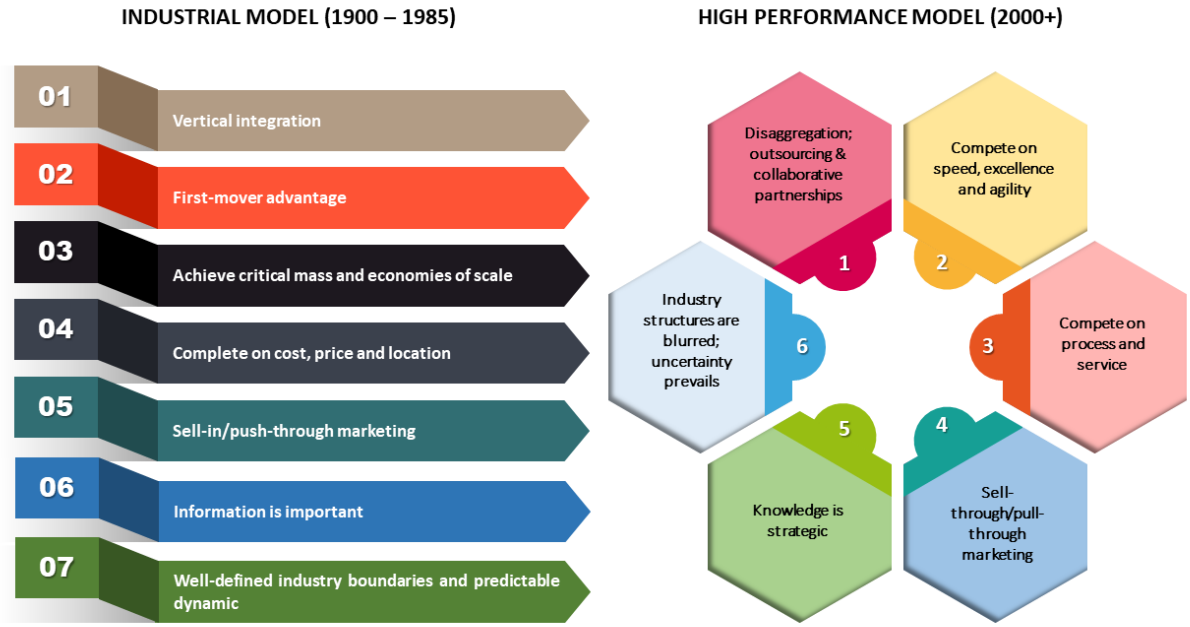


Figure 1.1. Fundamental changes are driving new business dynamics (Adapted from Mische, 2001, p. 10)

The question therefore exists in the literature and in the marketplace: what makes High Performance Organisations (HPOs) successful and what sustains them? Can one analyse the building blocks of an HPO and successfully apply these to other organisations?

Holbeche (2005) believed organisations today are fast-moving, complicated, and unpredictable and the notion of them as living, complex, adaptive systems seems quite apt. Like organisms, organisations need to also renew themselves, therefore implying that constant change should be expected, scanning, and planning continuously, as opposed to on an annual basis. In the past the focus was only on improving the status quo, for example in terms of operational efficiency, however now organisations need to also work in sustainable ways or, like organisms, they will die if no new sources of sustenance are found for the future. Holbeche (2005, p. 12) furthermore contend that,

> *rather than only caring about the needs of external stakeholders, organisations need also to recognize the symbiotic relationship between the ability to survive and thrive*

(achieve business success), the health of the organism itself (culture), and the way in which the constituent parts (employees) are nourished and nurtured.

Emerging notions of an HPO may therefore complement some of the elements of earlier approaches, while a greater emphasis is on the question of sustainability. Reconciling seemingly incompatible needs would now be the focus of high performance organisations, that is to take into account the short- and long term; to be both fixed and continuously changing; both internally and externally facing; to be directed to the needs of the organisation as a whole as well as to the needs of individuals; and determined to harvest yesterday's successes and, at the same time, plant for tomorrow (Holbeche, 2005).

For approximately the first 1,000 years of business history the challenge of defining high performing organisations and then identifying common drivers of this performance was not explored, for the simple reason that it seemed to be too formidable a task. Therefore, many researchers did not even attempt it. The first researchers to attempt this were Tom Peters and Robert Waterman with their book, *In Search of Excellence*, published in 1980 – a 1,000 years into our business history and 80 years into our modern industrial age (Bronkhorst, 2011).

Major researchers in this domain include the following (Bronkhorst, 2011, p. 60):

Table 1.2

Major high performance researchers

Researchers/Authors	Year of Publication	Name of Publication
Argenti	1976	*Corporate Collapse*
Sir Michael Owen Edwards	Beginning of 1980s	*Back from the Brink*
Peters & Waterman	1982	*In Search of Excellence*
Bibeault	1982 (1998 revised edition)	*Corporate Turnaround*
Kandwalla	1983	*Innovative Corporate Turnarounds*
Slatter	1984	*Corporate Turnaround*
Kotter & Heskett	1992	*Corporate Culture and Performance*

Researchers/Authors	Year of Publication	Name of Publication
Jim Collins & Jerry Porras	1994	*Built to Last*
Hamel & Prahalad	1994	*Theory on Core Competency*
Treacy & Wiersema	1995	*Theory on Strategic Planning*
Pieter Bronkhorst	1996	*The Competencies, Personalities and Intervention Strategies of Successful Corporate Recovery CEOs*
Arun Jain	1998	*Corporate Excellence*
Jan Katzenbach	2000	*Peak Performance: Aligning the Hearts and Minds of your Employees*
Richard Foster & Sarah Kaplan	2001	*Creative Destruction: Why Companies that are Built to Last Underperform the Most and How to Successfully Transform Them*
Karl Weick & Kathleen Sutcliffe	2001	*Managing the Unexpected: Assuring High Performance in an Age of Complexity*
Jim Collins	2001	*Good to Great*
Chris Zook & James Allen	2001	*Profit from the Core: Growth in an Era of Turbulence*
Joyce, Nohria & Roberson	2003	*What really Works: The 4 + 12 Formula for Sustained Business Success*

Table 1.2 illustrates that researchers started thinking about high performance back in 1976, endeavouring to ascertain why some organisations fail and others succeed. Many a researcher has therefore posed the question (Collins, 2001, p. 9):

Figure 1.2. Research question frequently asked (Collins, 2001, p. 9)

Bronkhorst (2011, p. 59) asked the following questions:

- *What constitutes high performance organisations?*
- *What defines losing organisations?*
- *Are the winning high performance companies those with the biggest market share, the biggest market capitalisation, the biggest turnover, the largest sales growth or simply those that remain standing at the end of the game?*

The context of declining or growing economic cycles, a myriad different industries and countless other variables add to this complexity. Even if the criteria for an HPO can be determined, the next question is where to find high performance: on individual, group, or organisational level. Much research has been conducted on the high performing individual and group; therefore, the organisational level needs to be further explored (Bronkhorst, 2011).

South African organisations also struggle with high performance and more specifically, state-owned entities (SOEs). Currently, SOEs in South Africa are under strain to perform which is evident by the amount of public strike action around service delivery, as well as bailouts from the main shareholders to ensure that service delivery continues (Olivier, 2014).

How does an organisation turn good results into great results? What makes one organisation good and another great? Which aspects within an organisation play vital roles into taking an organisation from good to great? Are some aspects more important than others, if so, which ones? These are the kinds of questions that have been explored and researched over the years and various researchers have proposed different theories and models that impact high performance as well as definitions around high performance (Bronkhorst, 2011; Collins, 2001; Foster & Kaplan, 2001; Joyce, Nohria, & Roberson, 2003; Peters & Waterman, 1982).

1.3 PROBLEM STATEMENT

High performance is not only about financial performance and profit organisations make; it is about much more than this. Over the last few decades, many organisations world-wide have been searching for elements that constitute organisational success. Managers have been trying out many different improvement concepts often with mixed results (De Waal, 2008).

Akdemir, Erdem, and Polat (2010) found that, over the years, many organisations have struggled with the challenges of defining and managing their high performance. The literature lists many different definitions of an HPO as the definitions change according to authors and their academic discipline. The same is true for the characteristics of HPOs: it varies according to researcher or scholar. An organisation's context and focus, goals and priorities, skills and experience levels, and culture are dependent on the ideal or perfect structure of a high performance organisation. Akdemir et al. (2010) suggested that knowledge and human factors are promoted and understood by successful organisations – this is the understanding level of HPO.

Considering the above, the researcher anticipated that when organisations do not have a clear understanding of what high performance entails, they are unable to create a clear and consistent path towards high performance. In addition to this, most organisations have competitors they must compete with daily. Therefore, to succeed, organisations will benefit from having a scientifically validated definition and model or framework of high performance – this allows them to follow a structured and verified roadmap to reach and sustain high performance. This also capacitates organisations to assess and identify gaps relating to high performance and be in a position to close the gaps, especially in SOEs in South Africa. SOEs experience challenges such as high board and executive management turnover, perennial underperformance necessitating regular bailouts, and challenge regarding the division of power between their boards and the various shareholder ministers (Thabane & Steyn-Van Deventer, 2018).

Combining the definitions in the literature, De Waal (2010b) distinguished the following themes for high performance:

- Over a long period of time an HPO achieves sustained growth which, in comparison to the performance of its peer group, is better.
- A great ability to adapt to changes is intrinsic in an HPO.
- An ability to react quickly to these changes.
- An HPO has a long-term orientation.
- A HPO's management processes are integrated and alignment of the strategy, structure, processes, and people is found throughout the organisation.
- Continuous improvement and reinvention of core capabilities are the focus areas of an HPO.
- Much effort is spent on improving working conditions and workforce development opportunities.

The starting point for high performance is a clear definition of and a model for high performance. In fact, taking it one step further to achieve world-class quality, organisations have increasingly started to realise that they do not operate in a vacuum and therefore need to work closely together with their suppliers and customers in order to create value added chains. When all parties then strive to be high performing and their co-operations are of the same high standard, they can jointly deliver the desired world-class quality. This is referred to as High Performance Partnerships (HPP) (De Waal, Goedegebuure, & Hinfelaar, 2015).

The development of a high performance model for a state-owned entity can only assist in the endeavour to improve the performance of state-owned entities. The focus of this study is specifically an IT organisation and SOE. From the discussion above it is evident that there is a need for a developed and validated high performance model for South African state-owned entities.

1.3.1 Research questions pertaining to the literature review

Considering the wider, current HPO literature, the general research question was formulated as follows:

How can a High Performance Model for an IT organisation be developed and validated?

1.3.2 Research questions pertaining to the literature review

The following research questions emerged from the literature review:

- **Research question 1:** How is high performance defined?
- **Research question 2:** What high performing frameworks/models exist in the literature?
- **Research question 3:** What sustains high performing organisations?
- **Research question 4:** What does a theoretical High Performance Model look like?

1.3.3 Research questions pertaining to the empirical study

The following specific research questions were formulated in terms of the empirical study:

- **Research question 1:** How valid and reliable is an HPO questionnaire used to measure HPO status in an IT organisation?
- **Research question 2:** How valid is a current high performance model in an IT organisation?
- **Research question 3:** What changes relating to the HPO model took place between the first, second and third measurements?

- **Research question 4:** Do biographical variables play a role in high performance?

1.4 AIMS

The research study has a general aim as well as specific theoretical and empirical aims.

1.4.1 General aim of the research

The general aim was to develop and validate a High Performance Model for an IT organisation.

1.4.2 Specific aims of the study

In terms of the literature review and empirical study, the following specific aims were formulated for the research study:

1.4.2.1 Literature review

The following specific theoretical aims were identified:

- **Research aim 1**: Define High Performance Organisations.
- **Research aim 2**: Evaluate (assess) existing High Performance frameworks/models.
- **Research aim 3**: Identify what sustains high performance.
- **Research aim 4**: Develop/identify a theoretical High Performance Model.

1.4.2.2 Empirical study

The specific empirical aims are to:

- **Research aim 1**: To gather data by means of three measurements over six years, which can be used to statistically determine the organisational and behavioural variables that influence high performance in an IT organisation in South Africa.
- **Research aim 2:** To validate the questionnaire and determine its reliability.
- **Research aim 3:** To validate the IT organisation's High Performance Model by means of Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA).
- **Research aim 4:** To determine if any changes relating to the HPO model took place between the first, second and third measurements.
- **Research aim 5:** To assess whether biographical variables play a role in high performance.

1.5 STATEMENT OF SIGNIFICANCE

Firstly, high performance is difficult to define and secondly, there exist various HPO frameworks and models. It seems logical that, to be classified as an HPO, there must be a roadmap that an organisation can follow, but which one? This research attempts to answer these questions.

Existing literature on HPOs appears to be vast and it seems to be a well-researched topic on a global scale however not over a long term (longitudinal) nor in the South African context. Therefore, this research may provide a foundation to longitudinal HPO studies and further research on the HPO front in South Africa specifically and may also be of importance to and use for organisations globally and locally.

1.5.1 Potential contribution at a theoretical level

On a theoretical level, this research may provide useful insight in identifying what makes an HPO. A review of HPO research can assist in determining which constructs contribute to high performance. Research showed that there are various HPO frameworks and models, some have been validated and some have not. This study should therefore provide a good basis for exploring the existing research on HPOs and narrowing down the vast amount of literature to identify constructs that contribute to high performance.

These constructs can then be used to develop a theoretical HPO model which can be validated through an empirical study. Once an HPO model has been identified, it can be used to measure any organisation's high performance, identify gaps the organisation can develop to improve high performance and benchmark other organisations in order to learn from each other to reach high performance.

1.5.2 Potential contribution at an empirical level

Empirically, this research should contribute to identify key constructs which lead to high performance. In the event where none of the identified constructs play a role in high performance and no model can be developed, future researchers can rule out the identified constructs and embark on new research studies that can identify potential constructs for high performance.

This study should highlight whether individuals with different years of work, age, race, gender, and job level differ in terms of high performance. Identifying these differences could enable organisations to better manage their employees based on years of work, age, race, gender, and job level. This should better equip managers to manage diversity.

The development and testing of an empirical model for high performance should be of value to state-owned entities and more specifically for those in an IT environment.

1.5.3 Potential contribution at a practical level

On a practical level, this research should assist industrial and organisational psychologists, consulting psychologists and human resource practitioners to develop a comprehensive understanding of HPOs. As previously mentioned, (refer to 1.5.2) group differences should enable managers to manage diversity in an HPO more effectively.

Apart from adding to HPO research in South Africa, future researchers may be able to use the constructs for HPO identified in this study as a basis for their studies, thereby increasing the knowledge on HPOs in South Africa beyond state-owned entities.

The final product, that is an empirical model for high performance, should provide a scientifically validated roadmap for IT organisations that aim to obtain and sustain high performance.

1.6 THE PARADIGM PERSPECTIVES

1.6.1 The theoretical paradigm

1.6.1.1 Industrial and Organisational Psychology (IOP)

Veldsman (2001) defined the core identity of Industrial Psychology as a field of enquiry, a discipline, a domain of practice and a profession focusing on people's world of work from a psycho-social perspective, by striving for an understanding and enhancement of that world through the generation and utilisation of its theoretical knowledge objects.

According to Aamodt (2007) this paradigm applied psychological theories to explain and enhance the effectiveness of human behaviour in the workplace in order to contribute to an organisation's success by improving the performance and well-being of the people in the organisation (Wilson, 2010).

1.6.1.2 Organisational Development

Cummings and Worley (2009, p. 1) defined Organisational Development (OD) as "*a system-wide application and transfer of behavioural science knowledge to the planned development, improvement, and reinforcement of the strategies, structures, and processes that lead to organisational effectiveness*". An opportunity for individual, group, organisational and ultimately, societal development is presented in OD from a change point of view. Organisational Development intervention methods can apply to each of these levels, according to the degree to which they affect human processes (communication, decision-making, problem resolution, and leadership), techno-structures (type of design, the structure of tasks, and the level of delegation and formalisation), management of human resources (development of skills, modes of socialisation, and systems of promotion or rewards), and strategy (positioning in the market, type of transactions with the environment, and organisational culture as a tool for stakeholders). Based on the theory of open systems, OD relies on system-wide application, which is well suited to crisis contexts that generally affect individual, organisational, and societal levels (Lalonde, 2010).

High Performance Organisation models and frameworks are developed within the OD space on the organisational level and cascaded to group and individual levels. On an organisational level, an HPO model provides a roadmap for reinforcing organisation effectiveness, applying

Cummings and Worley's (2009) definition referred to above. The HPO model is then implemented by groups or teams (e.g. management) and individuals within the group or team (e.g. employees). This collaboration may therefore lead to achieving and sustaining high performance.

1.6.1.3 Generalised Systems Theory

Within the IOP paradigm, the Generalised Systems Theory was followed. Laszlo and Krippner (1998) identified a system as a whole made up of interdependent components in interaction. A system in its most basic definition is "*a group of interacting components that conserves some identifiable set of relations with the sum of the components plus their relations (i.e. the system itself) conserving some identifiable set of relations to other entities (including other systems)* (Laszlo & Krippner, 1998, p. 51).

According to Beer (2009), organisations are complex, 'high fit', multidimensional systems in which all facets need to fit together for the organisation to create sustained high performance. This 'fit' refers to the facets that need to be internally consistent and externally relevant. The many facets of an organisation, that is strategy, organisation, people, and culture, interact not in linear ways but rather in circular ones. A trademark of high commitment, high performance organisations (HCHP) is therefore for them to be inherently paradoxical, which means that successful transformation leaders need to embrace opposites and find ways to make them work harmoniously. From a philosophical point of view Beer (2009) points out that this relates to the Taoist Sage Lao Tzu, who refers to 'opposites that coexist and the presence of each demands the other'. Consequently, an And/Also Perspective needs to be adopted, as opposed to the Either/Or Perspective common in low-performance and low-commitment organisations (Beer, 2009).

1.6.2 The meta-theoretical paradigm

On a meta-theoretical level, the study falls within the *Positivist Research Paradigm*. Terre Blanche and Durrheim (2006) contended that positivism was concerned with external reality according to certain laws used by detached and objective observers who have tested their hypotheses against experimental and other quantitative methods. Objective measurement was therefore used to measure high performance in an IT organisation.

1.6.3 The methodological paradigm

A *quantitative approach* is followed in this study in order to generate new theory (Punch, 2005). An existing HPO Model will be empirically validated. In order for the model to be empirically valid, it must have three key properties (Martinez-Pons, 1997):

- *It must have explanatory/predictive power:* The model must explain and predict variability in the variables of interest.
- *It must be parsimonious:* The model must explain as much of the variance in the variables of interest with as simple a theoretical structure as possible.
- *It must fit the data:* Enough relationships among the model's components must be stipulated to account for maximum variance.

1.6.4 Central hypothesis

The central hypothesis of this research was formulated as follows:

The developed and validated High Performance Model is consistent over three years of study.

In the next section, the research design will be discussed.

1.7 RESEARCH DESIGN

The plan, structure and steps that are followed to answer the research questions, is referred to as the research design (Babbie, 2010; Creswell, 2009; Kerlinger, 1986). Babbie and Mouton (2001, p. 74) described the research design as *"a plan or blueprint of how you intend conducting the research"*. It consists of the research approach and the research method. Figure 1.3 sets out the research design that this study followed.

Mouton and Marais' (1994) research model was adopted to conduct the research process. The reason for this is that their research model 'fits' with the current study in that it was conducted within the social sciences domain. The research design consisted of two phases, namely a literature review (Phase 1) and empirical study (Phase 2). In Phase 1, the literature on HPOs was explored and documented. Then the validity of the literature was determined by analysing the various HPO frameworks and models according to a certain set of criteria as defined by Belt (2008). His criteria for evaluation of HPOs were customised for the purposes of this research – see Chapter 3. An empirical approach was deemed appropriate for this study as it assisted in linking generated data to theoretical variables to answer the research question. An empirical approach would also enable the research hypotheses to be accepted or rejected (Babbie, 2010).

The two phases provide a paradigmatic framework as illustrated in Figure 1.3:

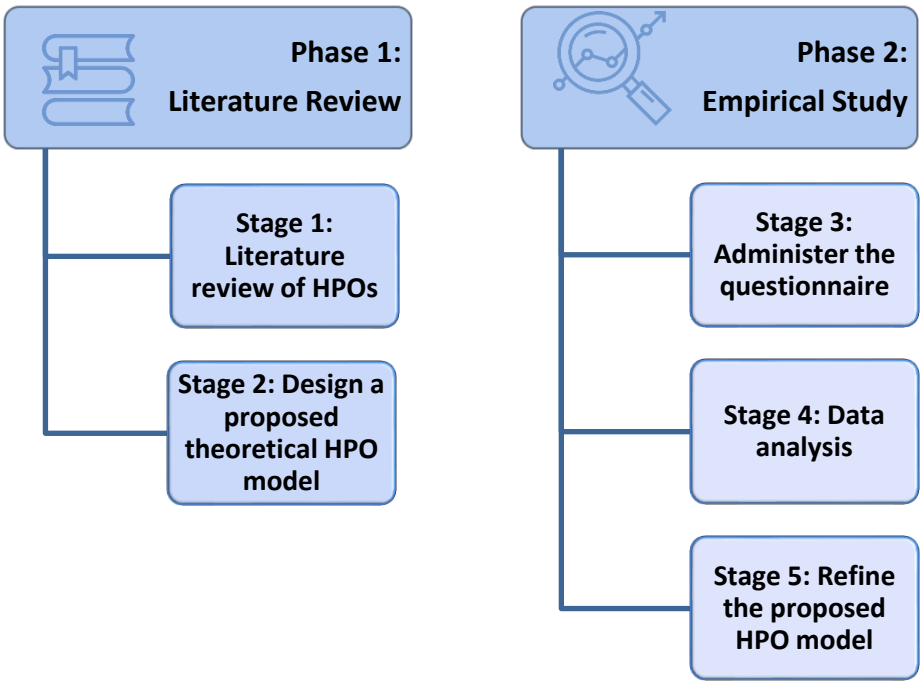


Figure 1.3. Research design

1.7.1 Research variables

Research variables are factors that can be manipulated and measured (Shuttleworth, 2008). Two types of variables exist, namely independent variables, that is variables that can be manipulated, and dependent variables, that is effects or outcome that is affected by the independent variable (Babbie, 2010). The items measured by the HPO questionnaire used in this study were the independent variables or the manifested constructs, while the latent construct, high performance, is the dependent variable.

The biographical variables such as age, race, gender, job level and years of work were also part of the questionnaire. These variables are easy to identify and measure and provide objective characteristics of the respondents (Moshoeu, 2017).

1.7.2 Unit of analysis

The unit of analysis is the major entity that is analysed in the study, for example, individuals, groups, artefacts, and social interactions are examples of units of analysis (Trochim, 2006). For the purposes of this study, the unit of analysis was the individuals in the IT organisation who completed the HPO questionnaire.

In the empirical research process, data was gathered from the IT organisation by means of an HPO questionnaire instrument. The questionnaire was administered three times over six years, that is 2012, 2014 and 2016. The data obtained was the statistically analysed by using Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) (Hair, Black, Babin, & Anderson, 2010). Recommendations were then made to propose a new HPO Model.

1.8 RESEARCH APPROACH

In terms of the empirical study, a quantitative research approach was adopted in this study in and post-positivist claims were used to develop knowledge. According to Creswell (2009), cause and effect thinking, reduction to specific variables, hypotheses and questions are included, as well as the use of measurement when using a post-positivism approach.

The repeated measure design research was used on three occasions to gather data on the organisation's High Performance Model and the implementation thereof. According to Bergh (1995), repeated measure design implies that subjects are measured two or more times on a dependent variable. The purpose of the HPO questionnaire was to determine how far the IT organisation was from becoming an HPO at the time of administration of the questionnaire. The questionnaire was implemented three times; therefore, the assumption was made that it may have indicated if any movement or change had taken place that brought the organisation closer to that of an HPO.

1.9 RESEARCH METHOD

Babbie and Mouton (2009) contended that the research process, the kind of tools, and procedures are the focus of the research method.

1.9.1 Research respondents

The research population consisted of the employees of the relevant IT organisation. During all three iterations of the questionnaire, there were approximately 3,200 employees in total in the organisation. The samples that participated in the study can be broken down as follows:

Table 1.3

Research respondents' breakdown per year

Questionnaire Year	Number of Respondents	Representation %
2012	1,145	36%
2014	746	23%
2016	1,560	49%
TOTAL	**3 451**	

Convenience sampling, a non-probability sampling method (Babbie, 2010) was chosen as a result of employees being invited to voluntarily complete the questionnaire. The organisation was going through a restructuring process at the time of administration of the questionnaire in 2012, therefore it was expected that not many employees would want to participate. The restructuring continued for some time, even during the time that the questionnaire was administered in 2014. This might be the reason for the lower sample in 2014. By 2016 the restructuring process was completed, and the higher participation rate is clearly demonstrated.

1.9.2 Measuring Instrument

To measure the organisation's HPO Model, an HPO questionnaire was developed by Martins and Martins in 2012 (unpublished). The questionnaire consisted of two sections, namely biographical information, and the questionnaire statements. A total of 91 statements were used to assess the following 13 dimensions:

1. Building a High Performance Organisation.
2. Change and Renewal.
3. Diversity.
4. Employer Brand.
5. Employee Engagement.
6. Employee Satisfaction.
7. Employer of Choice.
8. Knowledge Management.
9. Leadership.
10. Culture (the participating organisation's culture).
11. Vision, Mission and Values.
12. Work Environment.
13. CMMI Institutionalisation.

These dimensions were measured by means of a questionnaire, implemented two years apart over three years, that is 2012, 2014, and 2016. The development of the instrument as well as the validity and reliability are discussed in Chapter 4.

1.9.3 Research Procedure

Employees were invited to voluntarily participate in the questionnaire and given a choice to complete the questionnaire either online (electronically) or by hand (pen and paper). In this way, a convenience sample was established. After completion, the results were imported into an electronic spreadsheet format.

1.9.4 Statistical analysis

The data gathered was analysed using the Statistical Package for Social Sciences (IBM SPSS Version 24, 2017) computer software, including the AMOS (Analysis of Moment Structures) module, Version 24. Social scientists make use of this comprehensive set of programmes which provides a wide range of statistical options (Durrheim, 2006).

Various types of statistical analysis techniques were used in this study, namely descriptive statistical analysis, correlation analysis, inferential analysis, and multivariate statistics. The different techniques are discussed below:

Descriptive statistics involves statistical procedures that describe the population of the study, that is the mean (averages of all the values), the standard deviation (illustrates variation from the mean) as well as frequency and skewness (measure a distributions' deviation from symmetry (Terre Blanche & Durrheim, 2006).

To make inferences about the data, *inferential statistics* were used (i.e. making predictions about a population by observing and analysing the sample). The following techniques were used in this study:

- Factor analysis is a ‘data reduction’ technique which takes a large set of variables and looks for a way the data may be ‘reduced’ or summarised using a smaller set of factors or components (Pallant, 2011). Factor analysis was used in this study to examine the data or results obtained from the questionnaire. In doing this, interrelationships among the items could be determined and clusters of items that share sufficient variation to justify their existence as a factor or construct, could be identified (Pallant, 2011).

The following factor analysis techniques were used in this study:

- Exploratory factor analysis (EFA), where factors are estimated using a mathematical model and only the shared variance is analysed (Pallant, 2011).
- Confirmatory Factor Analysis (CFA), a multivariate technique used to test (confirm) a pre-specified relationship specification (Hair et al., 2010).
    - Cronbach’s alpha was used to analyse the internal consistency (reliability) of the questionnaire, that is the degree to which responses are consistent across the items within a measure (Green & Salkind, 2014).
    - Terre Blanche and Durrheim (2006) explained the Pearson’s correlation coefficient as a measure of the linear correlation (dependence) between two variables, X and Y, giving a value between +1 and -1 inclusively. A value of ±1 shows a perfect degree of association between the two variables, while going towards 0 shows a weaker relationship.
    - The direction of the strength of the relationship between two or more variables is tested by correlation statistics, and the strength of this relationship is represented by a correlation coefficient (Bryman, 2010). Pearson product-moment correlation coefficient (r) was used to typically calculate the magnitude or direction and strength of the relationship between variables (Cooper & Schindler, 2014).
    - *Independent samples t*-tests analyses the data differences between the means of two groups (Pallant, 2011), that is comparisons between groups of only two

categories, (e.g. males and females). Independent samples t-tests determine the construct validity of a questionnaire.

- Analysis of variance (ANOVA) tests compares the mean scores of more than two groups, that is the variance (variability in scores) between the different groups (believed to be due to the independent variable) is compared with the variability within each of the groups (believed to be due to chance) (Pallant, 2011).

The different HPO models for the different years of study, that is 2012, 2014, and 2016, were compared to each other by means of EFA and CFA and conclusions drawn from this.

1.9.5 Modification of the theoretical HPO model

The theoretical HPO Model was modified by incorporating research findings which showed which constructs should be included in the new HPO Model to effectively measure high performance. The researcher then arrived at an integrated HPO Model.

1.10 ETHICAL CONSIDERATIONS

When working with human beings, ethics is a fundamental concern throughout the planning, designing, implementing, and reporting of research findings (Wassenaar, 2006). In light of this, the researcher requested ethical clearance and permission to conduct the research from UNISA's Department of Industrial and Organisational Psychology (IOP) and the University's Ethics Committee. Furthermore, permission was requested from the relevant authorities within the IT organisation to conduct the study. Finally, participation in the HPO questionnaire was voluntary and employees in the relevant organisation could choose whether to participate or not.

1.11 CHAPTER LAYOUT

The chapters in this thesis are as follows:

Chapter 1: Scientific orientation to the research

Chapter 2: Defining and evaluating high performance

Chapter 3: The development of a theoretical High Performance Model

Chapter 4: Research design and methodology

Chapter 5: Research results

Chapter 6: Conclusions, limitations and recommendations

1.12 CHAPTER SUMMARY

This chapter provided the groundwork for the study at hand by discussing an overview of the background and rationale of the research and the problem statement. It also described the problem statement and the general aim of the study, the aims for the literature review as well as the specific aims for the empirical study were discussed. The statement of significance and paradigm perspectives were highlighted. The chapter also described the research design, research approach, and the research method. Ethical considerations were discussed and finally, the chapter concluded with the chapter layout.

Chapter 2 involves a literature review of HPOs, what they look like and why they are referred to as such. This chapter also discusses existing High Performance frameworks/models which measure high performance within organisations.

CHAPTER 2: DEFINING AND EVALUATING HIGH PERFORMANCE

Tolstoy was right: each unhappy family is unhappy in its own way, but all happy families – or high-performance organisations – are alike. By understanding the common strands of organisational DNA, all companies can put themselves in a stronger position to achieve success – The Boston Consulting Group (2011)

2.1 INTRODUCTION

This chapter aims to conceptualise the construct of an HPO from a theoretical perspective. The various definitions that exist in the literature are discussed to identify a definition of high performance for the research study. It then discusses existing high performance frameworks/models with the aim to arrive at a framework for high performance for this study.

Forbes started their list of top 100 companies in 1917 however by 1987, 61 of these identified companies did not exist anymore and of the remaining 39, only 18 had remained in the top 100. The remaining 39's return was 20% less than the overall market for the period. In the Fortune 500 list between 1965 and 1995, Jim Collins' study of 1,435 companies found that only 11 were able to move from simply good performance to great performance – performance here defined as cumulative stock returns 6.9 times the general market for a period of 15 years or more. The performance of half of these companies has declined below the level that qualified them as great companies since completion of the Collins' study (Beer, 2009).

Peter Drucker (1989) emphasized the power of the principles around which work is organised. Table 2.1 explains this concept:

Table 2.1

Principles of work (Adapted from Bronkhorst, 2001, p. 54)

Period	Principles of Work
800-1650	Horses
1650-1750	Ships and horse-drawn carriages
1750	Machines
± 1995 until now	Information and computer systems

Between 800 and 1,650 the principles of work were arranged around horses. Ships and horse-drawn carriages determined work principles from 1650 to 1750, while machines became relevant in 1750. From 1995 until now information and computer systems took preference. Work habits, management practices and social behaviour were, and are still today, influenced by these changes (Bronkhorst, 2011).

To understand what is meant when reference is made to high performance the various definitions found in the literature are discussed in the following section.

2.2 HIGH PERFORMANCE ORGANISATION (HPO) DEFINED

The abundant and vast literature on HPOs (Argenti, 1976; Bibeault, 1982; 1998; Bronkhorst, 1996; Collins, 2001; Collins & Porras, 1994; Hamel & Prahalad, 1994; Joyce, Nohria, & Roberson, 2003; Kotter & Heskett, 1992; Peters & Waterman, 1982; Slatter, 1984; Treacy & Wiersema, 1995) suggest a variety of definitions for HPOs which indicates that there is no widely accepted definition of what a HPO is. Popovich (1998) defined an HPO within the public sector and used the following working definition (p. 11):

> *High performance organisations are groups of employees who produce desired goals or services at higher quality with the same or fewer resources. Their productivity and quality improve continuously, from day to day, week to week, and year to year, leading to the achievement of their mission.*

Popovich (1998) took a closer look at some aspects mentioned in this definition:

1. Although processes, technologies and techniques are important, the essential focus in the process of transformation and maintaining change are the *people*.
2. An HPO may or may not encompass the entire organisation or organisational unit – the definition refers to groups of employees, regardless of the extent of their span of control. Change starts in pockets and they cascade to a system-wide initiative.
3. Traditional organisational boundaries need not restrict HPOs, rather they can encompass different bureaus and agencies and can even create links across levels of government and across the boundaries of the public and private sectors.
4. Things that make the greatest contribution to achieving the mission is referred to in the definition as *desired good and services*. HPOs focus on their mission.
5. HPOs produce their results by using the same or fewer resources – they are competitive and sensitive to bottom-line pressure.
6. HPOs are dynamic, continually evolving entities.

Popovich (1998) believed it is just as important to develop HPOs in government as it is in the private sector. The reason he provided was that what we demand of businesses (i.e. value, quality, innovation, customer service) are also what we want from the public sector.

Kirkman, Lowe, and Young (1999) attempted a new HPO definition which speaks to what an HPO *does* instead of to what an HPO *is* (p. 13):

> *An organisational system that continually aligns its strategy, goals, objectives, and internal operations with the demands of its external environment to maximize organisational performance.*

The emphasis is therefore on how an organisation must be dynamic and constantly adjust to its environment to achieve high performance. The authors alluded to five different practices or components related to this definition, that is: (a) Self-managed work teams and sociotechnical systems; (b) Employee involvement, participation, and empowerment; (c) Total quality management; (d) Integrated production technologies; and (e) Learning organisation methods (Kirkman et al., 1999).

It is, however, important to note the applicability of these five high performance components depends on a specific organisation's environment and possibly even on the different departments within the larger environment. For example, in environments that demand constant innovation, self-managing work teams and employee involvement may be more appropriate. In this type of dynamic and complex environment quality management may take a backseat as a result of reliance on breakthroughs in innovation and speed. Production areas may be better suited to make use of total quality management. These five components are not static and may change in the future. When change occurs in organisational environments, new practices have to be developed in order to produce high performance (Kirkman et al., 1999).

Mische (2001) is of the opinion that managers usually directly relate high performance to financial performance and might mention something about employees and customers as an after-thought. After doing extensive research, a French researcher concluded that high performance means simply to do better or to improve one's performance continuously. Another researcher attains that high performance cannot be defined as it differs for every organisation and individual (Mische, 2001).

Mische (2001) cultivated a definition of high performance from the behaviours of those companies that represent the high performers, and defined it as follows (p. 40):

> *One that consistently sets the performance standard in creating and sustaining competitive advantage, exemplary financial performance, and stakeholder value over a long period of time.*

A central and essential component to the definition above is the term 'competitive advantage' – it is not merely about aiming to beat industry rivals or destroying the competition (Mische, 2001). High performance organisations *constructively compete* against themselves. This implies that the following are important in high performance organisations: (a) Setting the highest standards; (b) Staying focused; and (c) Building and leveraging their resources for their greatest success – within this internal competence is built, as well as a culture that probes, learns and applies knowledge and knows how to effectively compete in the face of continuous change and uncertainty (Mische, 2001).

Holbeche (2005) drew from various sources to define a high performance organisation. She referred to attempts from Pettigrew and Whipp (1991), Rowden (2001), Schein (1993) and Senge (1990) who believed in the concept of a learning organisation, that is organisations that have the ability to learn and react more quickly to a fluid market have an advantage over their competitors. Furthermore, Ashkenas et al. (1998) concluded that an organisation's ability to leverage its resources in a changing economic context leads to sustainable success in the medium to longer term. Having the capacity to learn, share, and deploy knowledge is the basis of leverage. The Gallup Survey on Trust (2002) suggested that a key component of a high performing organisation is trust. If change is handled ineffectively, trust is destroyed. If trust is present, employees will share information, develop team projects and 'go the extra mile' without being afraid that their goodwill and achievements will be exploited. Finally, Dunphy (2003) contended that leaders play a key role in rebuilding organisational communities where trust is evident. These authors were also of the opinion that global issues of ecological sustainability, human resource management, corporate citizenship and community renewal are intimately linked to corporate sustainability (Holbeche, 2005).

Holbeche (2005) built on the mentioned definitions and asserted that attention is moving away from 'slash and burn' approaches to change and instead moving towards a more

sustainable approach that is based on organisational culture and reflected in the behaviour and practice of management and employees. There is also a shift to a more inclusive approach to leading and managing business while considering a wider group of stakeholders and the organisation's social responsibility.

Watson (2007) opined that the energy in high performing organisations is focused on three bottom lines – being the *provider* of choice, the *employer* of choice, and the *investment* of choice. Blanchard (2007, p. 10) offers a similar 'triple bottom line' opinion when he stated:

> *High performing organisations are enterprises that over time continue to produce outstanding results with the highest level of satisfaction and commitment to success.*

The world of business has dramatically changed over the last 20 years. Peter Drucker predicted towards the end of the 1980s that the biggest shift globally would be the shift to a knowledge society (Drucker, 1989). The forces of the knowledge economy were only felt around 2005, a shift which influenced the fortune of companies and can be characterised as follows (Bronkhorst, 2011, p. 63):

- *The focus is on intangible rather than tangible resources.*
- *It functions within a hyper-competitive business environment.*
- *It is digital.*
- *It is virtual.*
- *It is networked.*

Knowledge has become a commodity and the source of today's competitive advantage; therefore, it must be managed as such. Knowledge has replaced monetary capital and knowledge workers have become intangible assets. In his research Bronkhorst (2011) found that management control systems also play a vital role in that it has a strong influence on organisational effectiveness and performance in terms of market share, revenue growth and profitability. Management control systems used to draw measurements and statistics of past

performance does not predict future performance. Therefore, management control systems of HPOs should also provide measurements on intangible issues such as human capital, client capital and process capital.

De Waal (2012), in the HPO Centre in the Netherlands, embarked on a five-year research study project stretching over 290 studies in order to determine the factors of sustainable high performance. The researchers put together an HPO Framework, which can be applied to any organisation worldwide. Practitioners can use the conceptual, scientifically validated HPO Framework to make decisions on how to improve organisational performance and make it sustainable. The HPO Framework is not a blueprint which managers can blindly apply to their organisation. Rather, managers are encouraged to translate the framework to their specific organisational situation in their current time, through designing of a specific variant of the framework that suits their organisation (De Waal, 2012).

The HPO Centre, as referred to in the former paragraph, defines an HPO as follows (De Waal, 2012, p. 37):

> *A high-performance organisation is one that achieves financial and non-financial results that are exceedingly better than those of its peer group, over a period of five years or more, by focusing in a disciplined way on what really matters to the organisation.*

De Waal (2012) emphasized that several interesting parts needed to be considered when defining HPOs:

- High performance is relative – performance is only ‘high’ when comparing it to a peer group (i.e. competitors or comparable organisations).
- Sustainable good results over a prolonged period are characteristic of an HPO, as opposed to only one, two or three years of doing well. The HPO Centre decided on five years as an indicator for two reasons, firstly an assumption was made that most

organisations have a three year (on average) strategic plan which can be evaluated in retrospect after five years. Secondly, 12.5 years is the approximate average life span of an organisation, and this figure appears to be declining. Therefore, an organisation can rightfully be said to be an HPO, if it performs much better compared to its competitors or comparable organisations, for almost half of the expected life span of a 'normal' organisation.

- Consistent growth for organisations is quite difficult to achieve, even at modest rates. Leaders in HPOs know what makes them successful in the long run, which means they have the discipline not to be distracted by the latest fad, and they continue to do what makes them successful and continuously improve these, that is processes, systems and behaviour – core capabilities and competencies.

Considering the previous discussion, De Waal's (2012) definition appears to be more comprehensive and all-inclusive, therefore, for the purposes of this research dissertation, his definition of HPOs will be used, (p. 37):

> *A high-performance organisation is one that achieves financial and non-financial results that are exceedingly better than those of its peer group, over a period of five years or more, by focusing in a disciplined way on what really matters to the organisation.*

Now that a definition has been decided upon, the researcher will explore the various HPO frameworks and models.

2.3 A BETTER WAY OF WORKING

The following discussion centres on HPO research that has been conducted in the field. It evaluates the HPO approaches followed and the effectiveness thereof. The research tracked the research from the 1980's to 2018 to provide an overview of the research conducted.

2.3.1 The breakthrough strategy

Schaffer (1988) capitalized on his experience as a management consultant and uses case studies to conduct his research and develop his 'Breakthrough Strategy'. This question was asked (p. 55): "*Why do crises stimulate radically higher performance?"* During discussions of the case studies, 'the hidden reserve' of organisations was revealed. This theory stated that in 'normal' times, people and organisations always look and feel busy, almost even to the point of being harassed and overworked. However, when the situation requires them to do so, they can double, triple, and even quadruple their output. The following zest factors were offered: (a) Sense of urgency; (b) A challenge; (c) Success near and clear; (d) People collaborate – a new 'esprit'; (e) Pride of achievement; (f) Fear of failure; (g) Exciting, novel, like a game; and (h) People experiment and ignore 'red tape' (Schaffer, 1988).

According to the researcher, Schaffer's theory proves interesting as it focuses on people's capabilities when faced with crises. His research suggested that people can perform much better and even optimally when under pressure and therefore implied that they may not be performing optimally when they are unruffled or operating in a calm manner. In a sense, he confirmed that the more you do, the more you can do. However, his model was not empirically tested; rather, it relied on his experience as a management consultant and case studies.

Anonymous (1989) reviewed Schaffer's (1988) work and contended that the logic is startlingly simple and direct. Schaffer (1988) discussed a lot of theory but is also practical in his approach. Sale (1989) believed the idea that people work harder in a crisis is not a new one, which leads to some scepticism arising and suggests that people might burn out as a result of working harder. When it comes to application of the breakthrough strategy to organisational change, the research becomes redundant as the emphasis is on new applications rather than new concepts. Schaffer (1988) did not address, for example, what happens if the initial breakthrough project fails? Managers are not always that good and life is not always that straightforward, therefore this strategy may not always succeed.

2.3.2 Self-designing organisations

A growing realisation amongst organisations is that designing high performance organisations is more easily talked about than accomplished. The researchers (Mohrman & Cummings, 1989) conducted extensive action research projects in organisations seeking to achieve high performance. They covered a wide range of industries, such as communications, electronics, banking, pharmaceuticals, chemicals, glassmaking, nonferrous forging, weapons, papermaking, education, and county government. Their strategy is a self-designing one, that is either the entire organisation is self-designing or only a sub-unit such as a plant or department. The more complex and stringent demands of the environment should be responded to by high performance organisations as such this capability should be built. These demands include the following: (a) Achieving multiple goals simultaneously; (b) Relating to multiple stakeholders and forming strong alliances; (c) Managing human, technological and financial resources; and (d) Adapting to change, thereby being extremely flexible and continually modifying themselves to improve performance (Mohrman & Cummings, 1989).

For high performance organisations to respond to the demands discussed above, Mohrman and Cummings (1989) discovered that at least four broad organising principles for achieving high performance can be identified, that is: (a) *Multiple information-processing systems* to assist organisations to better scan their environment and integrate their subparts so they respond to complex and changing conditions cohesively; (b) High performing organisations tend to organise themselves into smaller, relatively *self-contained units*, such as self-managing work teams and mini-business ventures. As such, organisations are enabled to manage complex and uncertain conditions by forming units to respond to specific segments or aspects of the environment. Also, information processing and decision-making are decentralised, and sub-units have the freedom to respond to immediate conditions; (c) High performing organisations make use of *flexible structures* that are continually being modified and improved to fit changes in strategy, tasks and environment; (d) Heavy emphasis is placed on *high-involvement practices* of human resources in HPOs. They foster a committed, skilled and flexible workforce that identifies strongly with the organisation's success and seek a high level of involvement in operating and developing the organisation (Mohrman & Cummings, 1989).

These four broad organising principles provide general prescriptions for the design of high performing organisations. They identify important organisational features and outline a direction for achieving high performance. Implementation, however, entails that organisations learn how to use general knowledge to design specific structures, processes and practices suited to their situations. They must gain the capacity to self-design their own high performing innovations which enables them to translate the organising principles into designs that fit the organisation's technology, people, and environment (Mohrman & Cummings, 1989).

The demands listed by the researchers are still valid and significant in today's organisational landscape, possibly even to a higher degree. Change is a constant, stakeholders' expectations and therefore organisational goals grow daily, strong alliances ensure organisations have support during hard times and human, technological, and financial resources must be managed daily to ensure survival of the organisation (Mohrman & Cummings, 1989). Costello (1991) contended that Mohrman and Cummings (1989) can support their prescription for change with a generous amount of literature and they clearly indicate what steps need to be taken for a large, complex organisation to 'self-design' their own change and create high performance.

The researcher is of the opinion that the authors took a different approach to high performance, a customised rather than a one-size-fits-all one. This can be a good approach to high performance, as the organisation is not expected to fit a mould but can rather custom-design the mould. Also, when change inevitably happens, the organisation can respond to the changes quickly and modify organisational designs. However, the authors' model was not empirically tested to support their approach to high performance.

2.3.3 Creating strategic change: Designing the flexible, high performing organisation

Pasmore (1994) centered on flexibility playing an important role in high performance organisations. It was put forward that change is a constant and happens all around us all the time. People and organisations have a hard time understanding that change really is happening and that it matters: it does not happen comfortably or gradually. It is explained that change does not have to be bad necessarily and organisations must be prepared and flexible, therefore the recipe for success includes the following: (a) Flexible people; (b) Flexible (new) technology; (c) Flexible work (teamwork and collaboration); (d) Flexible thinking; (e) Flexible managers; and (f) Fractal organisation design (order in chaos) (Pasmore, 1994).

The researcher contends that Pasmore's (1994) focus is on change and flexibility: the more flexible organisations are, the better they will respond to change. Organisations and therefore the people within the organisation need to be flexible and open to transform, rigidity will cause resistance to change. Pasmore's (1994) focus is on equipping organisations to better deal with change, that is when an organisation is flexible in the above-mentioned areas, it can better respond to, and deal with, change which will then result in high performance. But is it so simple? When you start and end every change effort with performance improvement as the goal, does it automatically result in high performance?

Pasmore's (1994) model was not empirically tested but rather drawn from consulting work with major for-profit corporations. Dahl (1996) argued that Pasmore (1994) highlights two major themes on change, firstly the focus on people and how integral they are to change and second, flexibility. Only when people participate in the change process will change be effective. Flexibility involves flexible people, technology and systems and must be built into an organisation, its people, and its structures.

2.3.4 The empowerment imperative

Mills (1994) asserted that the empowerment of both individual and team is key to success and high performance. The management challenge of the nineties was dominated by the theme: doing more with less. Parallel to this is a better way of working, which, in a nutshell includes the following: (a) Reasons to follow orders: headquarters might be right, customer might have changed its mind, I am part of a plan, it is what is expected of me, and/or I must protect my career, (b) Reasons to use own discretion: best way to accomplish the objective; best information; and/or competent advisor, (c) Conditions for empowerment: competence and experience; necessary information; a proper reward; must know the mission; and/or fault tolerance, (d) Never empower people when they: do not know the mission; do not have the necessary information; do not have the necessary competence; and/or are afraid to take action.

The traditional system of management is directive, that is: *organise*, *deputise*, and *supervise* (ODS). This means a manager would traditionally decide what needs to be done and how to divide the work amongst the various people or units of the organisation. Then the manager decides whom to make responsible for getting certain things done; that is deputising. Finally, the manager carefully supervises to ensure assignments are completed on time and properly. The ODS management system can be done in one of two ways, that is autocratically (making decisions independently without consultation) or participatively (solicits opinions of subordinates when making decisions). The new style of management is empowerment, that is: *set goals*, *empower* and *measure (GEM) (*Mills, 1994).

Mills (1994) described six steps to a high performing organisation:

1. *Fault tolerance*

   To convince people to act empowered, we must understand when mistakes are okay. A mistake is okay when it is not part of a pattern, when we learn something from it, when it

is in the pursuit of goals, when it is within the scope of authority, when it is consistent with law and company principles and when proper procedures were used.

2. *Building trust*

There are three levels of trust: *Level 1: Predictability* – the company/manager acts in a way that is consistent with its own interests (lowest form of trust). The key steps to building trust are as follows: (a) building predictability; (b) make personal contact; (c) be consistent; and (d) be successful. *Level 2: Reliability* – when a company/manager promises something to employees, they can rely on it begin carried through (higher form of trust than predictability). The key steps to building reliability are as follows: (a) keep promises; (b) let people know where they stand; and (c) support each other. *Level 3: Mutuality* – employees believe their company/manager knows what matters to employees and have adopted, or internalised, their employees' goals (highest level of trust). The key steps to building mutuality are as follows: (a) take time to care; and (b) provide as much security as possible.

3. *Vision*

A vision is important for any business and should have the following characteristics: (a) it should be achievable; (b) it should be replaced by another after it is achieved; (c) it should have employee participation and buy-in from the outset; and (d) it should be exciting in order to get people involved.

4. *Setting goals*

Missions or goals should never be confused with mission statements. A good mission statement includes elements that are: (a) customer-centred; (b) employee-centred; (c) investor-centred; (d) community-centred; and (e) expresses the values of the firm. Employees should always practice getting the mission right. Empowered persons should repeat the mission to ensure understanding thereof. Furthermore, characteristics of goals for teams should be well-formulated, that is: (a) understandable; (b) broad enough to

support empowerment; (c) narrow enough so that attainment is measurable; (d) include a time dimension; (e) achievable; (f) aligned with other activities in the organisation. Rewards for team members should include the following: (a) good earnings opportunities; (b) fair treatment; (c) interesting assignments; (d) as much employee security as possible; (e) accomplishments; and/or (f) a company of which to be proud.

5. *Measurement*

Measurements should ideally be: (a) financial; (b) market-driven; (c) operational; and (d) organisational.

6. *Motivation*

The ODS management system motivated people to obey the supervisor or manager, who cares about cost-cutting, quality improvement, and customer responsiveness. The GEM management system motivates people to care about cost-cutting, quality improvement and customer responsiveness via teamwork. Maxims of motivation include the following: (a) a team must motivate itself; (b) the coach must create the setting; (c) job excitement is the key to motivation; (d) do not presume people are motivated; (e) do not accept less than full commitment; and (d) always build excitement. People should be assisted with empowerment by: (a) coping with stress; (b) giving and receiving constructive criticism; (c) learning to listen carefully.

When change is accompanied by risk and compulsion, chances are that people will resist it. Therefore, resistance to change should be reduced by: (a) eliminating the perception of risk by training people well and by providing a safety net; and (b) using volunteers as often as possible.

This research mainly focuses on how people (individuals or teams) contribute to high performance. Mills (1994) assumes that people are primary agents in contributing to high performance because there would be no organisation without people. According to the researcher, other factors also impact high performance (i.e. financial aspects, systems, processes etc.). The researcher is of the opinion that Mills' (1994) approach was not sufficiently substantiated by statistical analyses. Luiz, Santos, and Goncalves (1998) applied Mills' (1994) approach in four manufacturing companies in Brazil and concluded that the fundamental role of human resource management in the pursuit of long-term quality management must be considered. The human resources discipline must co-operate or take the lead in activities such as training and education, intensive communication programmes, organisational climate and cultural change monitoring, support in the consolidation of teams, support in self-control and empowerment programmes and administrative transparency. Managers also must be concerned with the overall consistency of the changing process, including different functions to deal with the different aspects of organisational learning, team formation and organisational culture management in a holistic way (Luiz et al., 1998).

2.3.5 The 'big' organisation

Duques and Gaske (1997) discussed the success of a specific organisation which achieved great heights, First Data Corporation (FDC). They noted that, when looking at the organisation of the future, the operative word is change. A thorough re-examination of organisational structure corporate responsibility and company culture is required because of rapid growth and a dynamic industry. These researchers observed that big, market-dominant companies rarely sustain market leadership over time and rarely create or develop innovative or breakthrough products or services once they have reached the top.

First Data Corporation have embraced the Service-Profit Chain as a framework for communicating business strategy, guiding managerial decision making and affirming company values. The Service-Profit Chain was developed by a group of Harvard professors and external consultants and it documents the economic impact of client retention on profitability and growth through the "Lifetime Value of Customers" concept. In essence,

service quality and value underpin client retention; high employee satisfaction and loyalty promote high-quality service. The interrelationships between the components of the Service-Profit Chain are illustrated below (Duques & Gaske, 1997):

Figure 2.1. Interrelationships between the components of the service-profit chain (Adapted from Duques & Gaske, 1997, p. 34)

Four critical factors are necessary to sustain the revenue growth, profitability and market leadership associated with great companies; these are (Duques & Gaske, 1997):

a) *Acting like a small company.* In other words, satisfy clients and strive to retain them. The following suggestions apply: (a) organise by product or service, not size; (b) develop a deep and trusting relationship with the current client base; and (c) get back in the mind-set and habit of making things yourself.

b) *Creating an urgency for innovation.* Adopt the 'make a little, sell a little' philosophy, have a current-client focus, know when to discard ideas as unworkable, and assure dedicated resources for innovative projects.

c) *Creating a lean, value-added corporate function.* This entails corporate leadership working to unencumber the business without being reckless (i.e. the corporate function should be an enabler rather than an obstructionist while setting the parameters in which the filed can operate freely). Corporate leadership should also facilitate leveraging organisational capability – sharing, information dissemination, etc., and redefine key positions and responsibilities. These efforts should not be influenced by political or turf barriers and they require absolute right of access and full support from all executive leaders.

d) *Creating an energizing culture.* Employee burnout should be prevented by attempting the following: (a) maintain clear articulation of and strong adherence to organisational values; (b) remain accountable for employee and client satisfaction at the local level; (c) associate low levels of fear with innovation; (d) associate security with earning, rather than being an entitlement. Employees will remain committed to the organisation if: (a) the company continues to invest in their development; (b) the company recognises contributions in a fair and equitable way; (c) the company ensures that high performance are provided with security (high performers do not get laid off when layoffs occur); and (d) work remains challenging and fun and workers understand how their role makes a difference.

These researchers looked at values of an organisation that would lead to high performance. When compared with other HPO models this research does not appear to be evolutionary as

these aspects (i.e. customer service, innovation, value-added functions, and energizing culture) are what would normally be expected of any 21st century organisation. Their HPO model was not was not sufficiently substantiated by empirical research.

Dragon (1997) contended that an underlying theme is the way managers have divided up work and assigned tasks. He stated that resources must be viewed through the lens of customer satisfaction and employee empowerment. Underdahl (2009) highlighted the importance of learning while doing and leadership's value by perpetual learning, as well as developing a conceptual toolkit gleaned from though leaders and personal experience. She contended that Einstein once observed that imagination is better than science – only the brave can conceptualise visions, strategies, and insights on managing in a new era, as there are no definitive, empirical answers. Only when the new 'era' has matured can closure be achieved, these authors collaborative effort epitomizes scholarly speculation.

2.3.6 The winning streak

The ten characteristic balances of high performance that emerged from Goldsmith and Clutterbuck's (1997) research are: (a) *Control versus autonomy* – how can organisations give people the maximum freedom to get on with the job and act as if they were owners of their slice of the business, yet exert just enough control to ensure the organisation gains the maximum benefit from its size and from a common sense of direction; (b) *Long-term strategy versus short-term urgency* – how can organisations persuade their managers to think long-term while maintaining urgency and action in the present; (c) *Evolutionary versus revolutionary change* – how can organisations ensure an effective balance between evolutionary and revolutionary change; (d) *Pride versus humility* – how can organisations sustain justified pride in their achievements without slipping into dangerous complacency; (c) *Focus versus breadth of vision* – how can managers focus on the core business and new opportunities at the same time; (d) *Values versus rules* – how can organisations get people to do the right things with the minimum of rules; (e) *Customer care versus customer count* – how can organisations balance the need for customer volume against the need to make every customer feel uniquely satisfied; (f) *Challenging people versus nurturing people* – how can

organisations get extraordinary performance out of ordinary people; (g) *Leaders versus managers* – how can leaders and managers display values-based leadership; and (h) *Gentle versus abrupt succession* – how can organisations create seamless succession (Goldsmith & Clutterbuck's, 1997).

In addition to balance, long-term high performing organisations emphasise three other characteristics (Goldsmith & Clutterbuck, 1997), which are: (a) a challenge culture; (b) simple (but not simplistic) solutions to complex problems; and (c) a highly developed sense of 'rightness' – the soul or the consciousness of the organisation (Goldsmith & Clutterbuck, 1997).

The Winning Streak covers many different aspects that should be considered when building a high performing organisation. The authors asked many questions which require an in-depth knowledge of the organisation. It is not a quick fix approach to building HPOs but rather requires analysis of the organisation, answering difficult questions and subsequently changing those aspects that hamper high performance. Goldsmith and Clutterbuck's (1997) HPO model was not sufficiently substantiated by empirical research. Anonymous (1997) maintained that secrets of consistently successful companies are not about lying down golden roles but rather about working on general principles such as devolved leadership, living the values and seamless succession. Goldsmith and Clutterbuck's (1997) work is mainly focused on the United Kingdom (UK), which may impact on its applicability in organisations outside of the UK.

2.3.7 In Search of European Excellence

In public perception, European organisations appear to be lagging behind American and Japanese ones, specifically regarding industrial might, technological prowess and management ability. The reason for this is largely due to management lag – from its seeming backwardness in exploiting the new technologies and philosophies of organisation and

achievement. Catching up would be a considerable task, let alone seizing the lead which would demand far more. It is, however, possible (Heller, 1997).

Heller (1997) identified ten key strategies with which Europe's revolutionaries can set off in search of their own brand of excellence, namely: (a) *Devolving leadership* – without losing control or direction; (b) *Driving radical change* – in the entire corporate system, not just in its parts; (c) *Reshaping culture* – to achieve long-term success; (d) *Dividing to rule* – winning the rewards of smallness while staying or growing large; (e) *Exploiting the 'organisation'* – by new approaches to central direction; (f) *Keeping the competitive edge* – in a world where the old ways of winning no longer work; (g) *Achieving constant renewal* – stopping success from sowing the seeds of decay; (h) *Managing the motivators* – so that people can motivate themselves; (i) *Making team-working work* – the new, indispensable skill; (j) *Achieving total management quality* – by managing everything much better.

The author's focus was on companies and managers who aim to create a European future by implementing the steps as illustrated above. The theory was that a new kind of excellent company is emerging: one that is fast on its feet, flexible, adventurous, responsive, and constantly improving and mutating. Managers must rise to meet the challenge and win the management wars (Heller, 1997). Anonymous (1997) offered an opposing view to Heller's book and maintained that Heller's (1997) perspective remains UK orientated and his approach less structured. Heller would have benefited from the accessible checklists and case studies provided by other authors such as Goldsmith and Clutterbuck. Heller's book is, however, an informative guide. Heller's (1997) HPO model was not sufficiently substantiated by empirical research.

2.3.8 Changing roles to create the High Performance Organisation

Butteriss' (1998) focus was on the changing role of the Human Resource (HR) function within an organisation. The answer to the numerous changes brought on by globalisation is to move HR from being a solely transactional, administrative, and reactive function, to being proactive and consultative, working with senior executives to create an HPO. Change

management plays an important part and should be managed on an organisational, business unit and individual level. HR processes and systems that create and support an HPO were identified: (a) Creating a common company-wide vision and value system; (b) developing a "competency-based" personnel framework; (c) providing leadership assessment and development; (d) moving people within the company for best advantage; (e) guaranteeing the workplace diversity that allows success in a company's varied national and global markets; (f) handling the question of change; (g) re-engineering the corporate HR function as a consulting centre to company management on hiring, training, managing, paying, retaining, and developing an organisation's human assets.

The author's research appears to be quite focused on the HR function. The HR function of the late 1990's is described in detail and suggested various ideas to re-invent the function, so that HR can assist in moving an organisation towards high performance. These ideas are quite practical and would be useful for an HR practitioner to implement. A an HPO model was not developed; rather the focus was on adapting and re-inventing current HR processes. Butteriss (1998) used case studies, but the work was not sufficiently substantiated by empirical research. Cooney (1998) contended that Butteriss (1998) had a practical approach with strong reports from the field. Comprehensive case studies were used and provided specific tips for re-inventing HR. Specific ways in which HR processes and systems can be adjusted to improve effectiveness and support an HPO was highlighted.

2.3.9 Strategies for High Performance Organisations

Lawler, Mohrman and Ledford (1998) considered the question: Why has major concern with the effectiveness of different management approaches developed? They believed the answer lay in the growing consensus that an effective approach to management offers organisations a powerful competitive advantage. Before 1980, organisations generally accepted the bureaucratic, hierarchical organisational model and varied only in some of the methods they used and how well they executed them. In the 1980s, this traditional bureaucratic paradigm began to break down and three paradigms started receiving the most attention, namely (Lawler, et al., 1998):

a) Employee involvement

Although there is no single authoritative source or theory that defines employee involvement as a management approach, the research on democratic leadership emphasised the consequences of employee involvement in decision making. It shows that, under certain conditions, employees are more committed to decisions and that better decisions are made if they are involved (Lawler et al., 1998).

The most important overall focus in the work on employee involvement concerns locating decisions at the lowest level in the organisation (i.e. employee involvement consistently advocates a bottom-up approach to management). Individuals or teams need to be given the power, information, and knowledge they need to work autonomously – independent of management control and direction. Management is only an enabler, a culture setter and a supporter of employee action (Lawler et al., 1998).

Finally reward systems, flattening the organisational structure and following a bottom-up approach to change management is imperative when aiming to attain employee involvement (Lawler et al., 1998).

b) Total Quality Management

Total Quality Management (TQM) uses internal customers to substitute for external customers in measuring the quality of the organisation's operations. Focusing on quality is considered a way to gain competitive advantage. Advocates of TQM believe that, when quality is improved, costs will drop, and organisations will respond more quickly and effectively to customer requests. However, TQM must become a part of the organisational culture, that is it is a culture in the sense that it should serve to change the

values of the organisation and its employees as well as their behaviour in various areas (Lawler et al., 1998).

Lawler et al. (1998) emphasised the technologies used to support both quality measurement and quality improvement as important elements of TQM. In addition, employees received a substantial amount of quality information and training in TQM programmes.

c) Process re-engineering

Reengineering was initially about improving the lateral processes of an organisation and creating an organisational structure that focusses on processes more than functions. Many of the change activities involved in reengineering today are driven by efforts to improve the utilization of computer systems and information technology by large organisations (Lawler et al., 1998).

This study continues Lawler et al.'s (1998) examination of the degree to which organisations are using management practices, policies and behaviours that are associated with employee involvement and total quality management. The aim of this research was to see how much change occurred from 1987 to 1996. Lawler et al. (1998) made use of a survey which was sent to 934 of the organisations listed in the 1986 Fortune 1,000 listing of the 500 largest service companies and the 500 largest industrial firms (Lawler et al., 1998).

This study was undertaken in the largest organisations within the United States. Therefore, smaller organisations were left out of the study. Only senior managers seem to have completed the survey, which means that other views on the lower job levels may differ. The researchers did however have a unique opportunity to compare previous survey data (1987, 1990, and 1993) to 1996 data to determine how management approaches and practices are changing (Lawler et al., 1998).

Lake (1996) contended that the study is of the 1,000 largest firms and does not provide any information about how these practices are being employed in small companies. On the other hand, it is useful to find a database which is both longitudinal and comprehensive in the areas of Employee Involvement and TQM which may be more art forms than science. More often than not, managers have to 'take it on faith' whether a particular practice is worth the investment or not, this book offers relief: it does not make the decision for the manager but rather provides him/her a sounder basis for decision. It was noticeable how relatively few companies in the sample of 1,000 use any practice at all, for example, information sharing. Total Quality Management and training practices were used more often; however, reward practices were used less often. This study can make an important contribution to the human side of enterprise by encouraging more widespread adoption of employee involvement practices and total quality management practices, because when used, the results are encouraging. The data is available, useful, and practical and the authors do well at being conservative in their interpretations and assisting in making sense of the statistics (Lake, 1996).

2.3.10 Measures of quality and high performance

Hodgetts's (1998) research focused on an elite few organisations who have won the Malcolm Baldridge National Quality Award. These organisations are world-class competitors and have demonstrated new ways to improve quality and response time, reduce costs and gain market share. The author studied 19 of the 24 most recent Baldridge winners at the time and designed an overall game plan for increasing both quality and productivity.

According to Hodgetts (1998) it is critical to, as a first step, address two fundamental considerations, namely mind-set and culture – these two aspects are critical to quality and high performance. The next step is to consider the operational steps which assist in targeting and measuring quality and high performance, namely:

(a) Focus on the customer: It is what you do *not* know that hurts you:

   a. Identify the key factors that are critical for superior customer satisfaction.

   b. Carefully craft forms of feedback for determining customer satisfaction.

   c. Determine the status of the results and take any necessary action for correcting errors and improving customer satisfaction.

(b) Train and develop the associates: Tap their potential and increase your quality:

   a. Make training and development mandatory and ongoing.

   b. Develop specific tools that work for the organisation.

   c. Review and measure the value of the training tools.

(c) Measure the operating results: Forget the anecdotes, look at the facts:

   a. Decide what should be tracked.

   b. Systematically gather and evaluate these data.

(d) Evaluate and develop the personnel: If you are not boundaryless, you are limited:

   a. Carefully and thoroughly assess personnel performance.

   b. Create a process for fully developing the potential of each individual.

(e) Recognise and reward accomplishments: Share the wealth and grow poor together:

   a. Develop a system for recognising all outstanding performance.

   b. Create a reward programme that is designed especially for your organisation.

(f) Keep on going: You are only as good as last quarter's performance:

a. Look for ways to innovate the current work processes and procedures.

b. Develop and effective benchmarking and continuous improvement system that relies on new-age thinking (Hodgetts, 2002).

Hodgetts (1998) adopted a practical approach to the research. The steps that need to be taken to achieve high performance were discussed and provided the reader with a practical questionnaire so that they may examine their own organisational performance. This is a unique approach that shows Hodgetts' (1998) understanding and implementation of high performance. However, Hodgetts' (1998) work was not sufficiently substantiated by empirical research. Kuratko (1998) reviewed Hodgetts' (1998) work and concluded that, although there were twenty lessons with numerous examples provided, there was no final commentary on the high performing companies that were used in the study.

2.3.11 Common HPO characteristics and themes

Popovich et al. (1998) found that when, looking at different strategies to help organisations become more effective, efficient, and adaptable, common characteristics and themes emerged. They described the following characteristics or principles of HPOs, they: (a) Are clear on their mission, that is, HPOs know what they need to achieve; (b) define outcomes and focus on results; (c) empower employees – continuous learning leads to change in a relationship between people and their work, change in relationship between the organisation and those it serves, and change in the relationship between the organisation and its external environment; (d) motivate and inspire people to succeed; (e) are flexible and adjust quickly to new conditions; (f) are competitive in terms of performance, including putting in place a performance management system that enables the measurement of performance, reports results and improves performance continuously; (g) restructure work processes to meet customer needs – sometimes to provide higher quality and more appropriate services at equal or reduced costs, the entire organisation must change; and (h) maintain communications with stakeholders.

Popovich's et al. (1998) research also described challenges and opportunities for change in the public sector, as well as how implementers can master the politics of change. The authors provided guidelines for planning for high performance as well as how central management systems can be strengthened to support high performance (i.e. high performance budgeting systems, high performance human resource systems, and high performance procurement systems).

The authors take on quite a structured approach to building HPOs. They took aspects that focused on the organisation as a whole but, also on employees, systems and processes into account. Everyone within the organisation has a role to play, that is the Chief Executive Officer (CEO) defines and clarifies the mission, management defines outcomes, focus on results, empower, and motivate people to succeed. Employees need to be flexible and competitive, restructure work processes to satisfy customers and maintain good communication. These aspects are almost what are expected of any organisation that wants to succeed in the 21st century, that is, there is nothing 'new' that Popovich's et al. (1998) model for high performance can add to the field today. The research did not identify one set of HPO characteristics or model but rather information and tools that can be used to build high performance. What sets this research apart from similar studies, is that it is focused on the public sector specifically – an area which is arguably more challenging to change to a high performance environment. This sector is not always considered when talking about high performance as it is not a sector that is supposed to make profit, but rather to serve the public. This perception has changed in recent years, and some public sector organisations may want to be given the opportunity to compete with private sector organisations. Popovich's et al. (1998) work was not sufficiently substantiated by empirical research.

2.3.12 Building the flexible firm

Many organisations have taken an extensive array of organisational experiments under way during the past decade: flattening and downsizing corporations; re-engineering the business process; subcontracting and outsourcing of non-core activities; creating multifunctional

project teams; empowering employees; increasing the workforce flexibility (multi-skilled workers); expanding the externalized workforce (temporary workers); highly specialized machinery is replaced by flexible manufacturing systems; developing multipurpose information systems (Volberda, 1998).

Management gurus and practitioners believed these experiments characterize the rise of a new ‘flexible firm’ (Handy, 1995; Kanter, 1994; Pasmore, 1994; Peters, 1987). These individuals argued that flexibility is required by every organisation. Traditional bureaucratic firms severely hamper an organisation’s ability to respond to accelerating competition. Flexible firms, in contrast, can respond appropriately and timeously to a wide variety of changes in the competitive environment. There is, however, an unresolved sense about whether the above experiments are interrelated or how exactly they transform contemporary corporations (Volberda, 1998).

Volberda (1998) developed a more strategic, integrated approach to flexibility, based on new developments in strategy and organisation theory, extensive interviews with practitioners, and detailed case studies of flexibility improvement within large corporations. Based on the results of the Flexibility Audit and Redesign Project (FAR project), an empirical study on flexibility improvement within three large Dutch companies (Philips Semiconductors, The Dutch Postbank, The Dutch Gas Company) and ongoing flexibility projects within KLM Royal Dutch Airlines, PTT Post, Van Ommeren Tank Storage, and Ericsson, he created a strategic framework which can assist managers to organise for flexibility.

In this framework, changing competitive environments require fundamentally new management and organizing principles, resulting in alternative flexible forms, as illustrated in Figure 2.2. (Volberda, 1998):

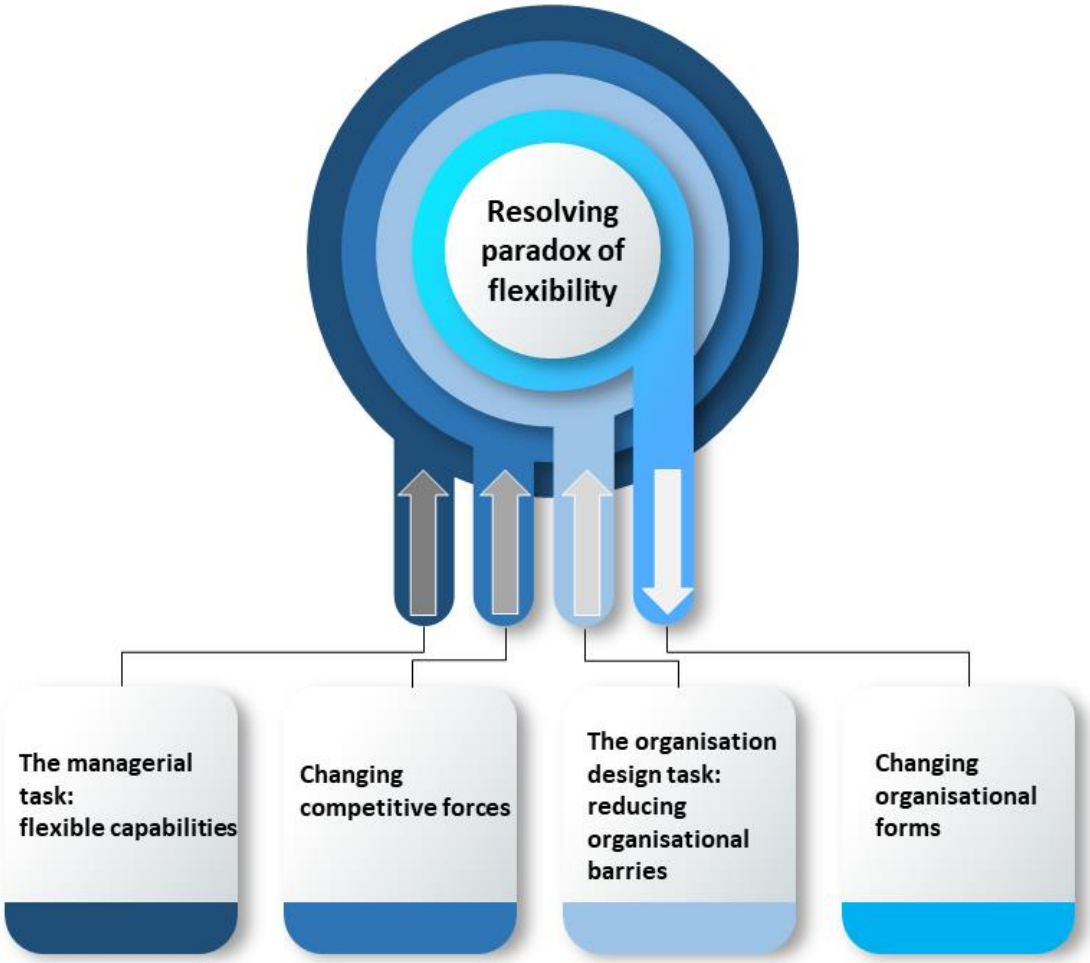


Figure 2.2. A strategic framework for flexibility (Adapted from Volberda, 1998, p. 6)

Organisations are forced by competitive changes to move more quickly and boldly and to experiment in ways that do not conform to traditional administrative theory. Although traditional organisational forms have worked well in the relatively stable environments of the past, the globalisation of markets, rapid technological change, shortening of product life cycles, and increasing aggressiveness of competitors have radically altered the ground rules for competing in the 1990s and beyond. Volberda (1998) addressed the question of how organisations should be organised to cope with these changing competitive environments. Organisations should continuously identify and develop new advantages to maintain control. This dynamic process requires new organisational forms that can explore new opportunities effectively as well as exploit those opportunities efficiently, that allow organisations to change their strategic focus easily even while developing and maintaining some strategic direction, and which can change their dominating norms and values as well as correct

deviations from essential norms and values. The paradoxical requirements of flexibility imply that balances must be struck if organisational forms are to remain vital. Organisations cannot survive without changes to adapt to changing conditions, yet they must also be stable enough to exploit the changes they have made (Volberda, 1998).

Volberda's (1998) framework suggested that two important tasks are required to resolve the paradox of flexibility. Firstly, flexibility is a managerial task, that is *can managers respond at the right time in the right way?* The concern here is with the managerial capabilities that provide the organisation with flexibility (e.g. manufacturing flexibility to expand the number of products the organisation can profitably offer in the market or innovation flexibility to reduce the response time for bringing new products to market). Secondly, the framework suggested that flexibility is an organisation design task, that is *can the organisation react at the right time in the directed way?* In this case, the concern is with the controllability or changeability of the organisation, which depends on the creation of the right conditions to foster flexibility. For example, manufacturing flexibility requires a technology with multipurpose machinery, universal equipment, and an extensive operational production repertoire. Similarly, innovation flexibility requires a structure of multifunctional teams, few hierarchical levels, and few process regulations (Volberda, 1998).

Combining the managerial and organisation design tasks involves a process of matching and resolving paradoxes. Management must develop dynamic capabilities that enhance flexibility, and the organisation must have an adequate organisational design to utilize those capabilities. Consequently, management must deal with a constructive tension between developing capabilities and preserving organisational conditions, which can be considered the building blocks of flexibility. Different organisations put these building blocks together in vastly different ways. From this framework several alternative flexible forms can be obtained, each reflecting a specific way of coping with the paradox of change and preservation (Volberda, 1998).

Volberda (1998) provided tools and techniques for supporting management efforts directed towards regeneration of mature or declining organisations and 'routinization' of chaotic

organisations as he referred to it. A method was designed for diagnosing organisational flexibility and guiding the transition process, namely, the Flexibility Audit and Redesign (FAR) method. The method seems to be quite practical and should be relatively easy to implement with the buy-in and support of the organisation, specifically buy-in from the managers. The focus is on developing capabilities on an organisational and individual level and in this way creating the desired flexibility.

Katz (1998) reasoned that Volberda's (1998) theory was a well-written discussion of management theory combined with pertinent business examples to provide a model of how flexibility can be included as a strategic focus. With the increasing rate of competitive change, there is a need for reliable models that can guide managers to more effectively organise their firms to cope with rapid changes in the competitive environment. Sanchez (2002) believed Volberda's (1998) book is a virtual compendium of issues affecting organisational flexibility and can be a benchmark against his own and other normative theories of how to increase flexibility can be measured. There is also potential for developing new normative theory which can provide a more fundamental view of the underlying causes of organisational inflexibility – this could suggest a simpler framework for representing and addressing the many issues Volberda (1998) raises. Down (1999) contended, in contrast, that Volberda's (1998) work is based too much on assumptions about the future of the global economy and the inevitability of flexibility as corporate response to the new world of 'hyper-competition' and 'new organisational forms'. Adaptive powers of monopolies to maintain the status quo is not mentioned often, as well as the *de facto* countervailing regulatory realities of state-commerce relations and the adaptive power of organised labour to hamper and contest the action or the corporation (Down, 1999).

2.3.13 Adaptive Enterprise

In an Information Age, unpredictable and rapid change are unavoidable in the business world. Large, complex organisations must and can adapt systematically and successfully to this kind of change. In the face of unpredictable change, the only strategy that makes sense is to become adaptive. Speed-to-market, customer intimacy, operational excellence, and

organisational agility are important but not adequate strategic objectives in and of themselves. Rather, they are attributes of the real objective: successful and systematic adaptation. Adaptation implies more than agility – it requires appropriate organisational response to change. When change becomes unpredictable, it follows that the appropriate response will be equally so (Haeckel, 1999).

Haeckel (1999) described two ways to think about an enterprise:

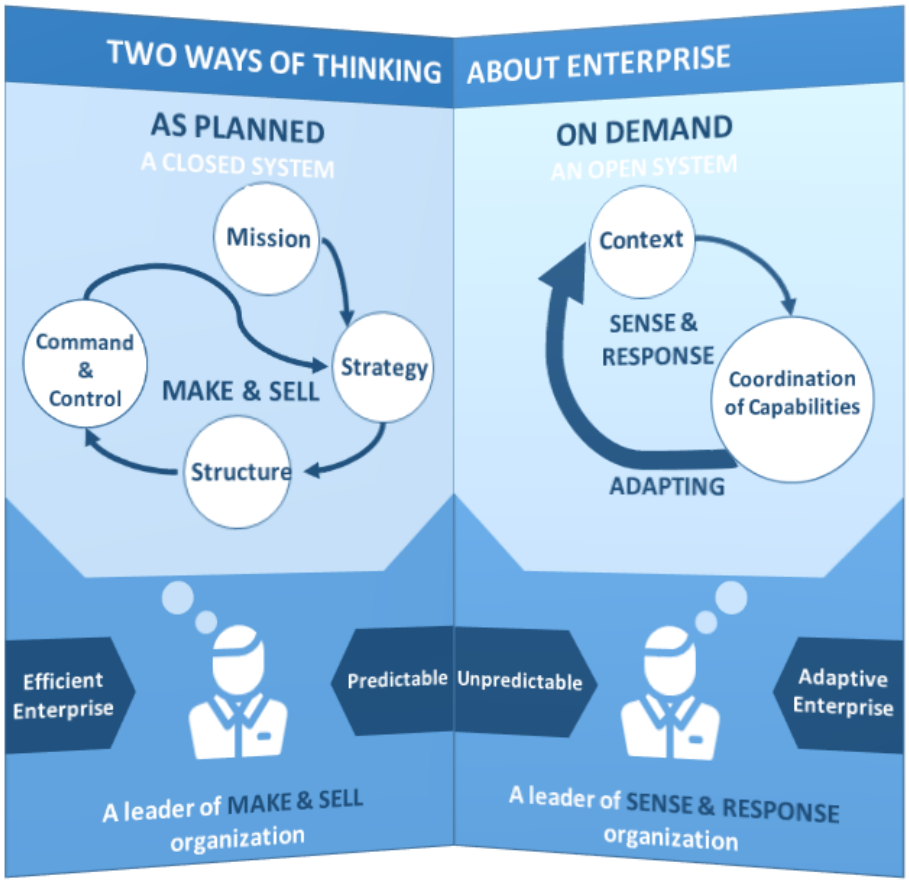


Figure 2.3. Two ways of thinking about an enterprise (Haeckel, 1999, p. 5)

According to Haeckel (1999) complexity theory has recently attracted attention as a new way of thinking about strategy. Some systems operating far from equilibrium consistently demonstrate an ability to self-organise and display emergent properties that enable them to adapt in unpredictable environments. This begs the question: Why not reconceptualise businesses as complex adaptive systems? This will result in organisations no longer developing appropriate strategies – they will simply emerge.

Although complexity theory has much to contribute and some of its principles constitute major underpinnings of the sense-and-respond-model, it is insufficient. The reason for this being that it does not address the unique properties of *social* systems – which is exactly what human organisations are. Decisions are made *within* the system and *about* the system by individuals. These decisions include if and how to change their own behaviours inside the system, the structure, and rules of the system, and even its purpose. Therefore, the sense-and-respond model adds *intentionality* and *purposefulness* to complexity, adaptiveness, and systems as essential organisational properties (Haeckel, 1999).

An organisation's ability to adapt depends on how it processes information. All successfully adapting systems have something in common: they transform apparent noise into meaning faster than apparent noise comes at them. This insight is leveraged into a generic way of fostering adaptive sense making and action. The leadership role is the one accountable for translating apparent noise into meaning about how and when to adapt the way the organisation adapts (i.e. careful design of the adaptive loop). Customer-back adaptiveness refers to the dispatch of capabilities on demand, as opposed to scheduling them efficiently in advance. In turn, this implies a modular organisational structure that should be effectively managed with a command and control governance system (Haeckel, 1999).

The sense-and-respond model addresses these issues by (Haeckel, 1999): (a) Organising information in a specific way to represent and support systematic adaptiveness by key roles in the firm (the adaptive loop); (b) Organisation assets and capabilities as a system of modules that can be dynamically dispatched into one-off value chains (modular organisation); and (c) Replacing command and control with a commitment-centric governance system that propagates the purpose, bounds, and essential structure of the business throughout the organisation. A sense-and-respond organisation is therefore a collection of capabilities and assets managed as a purposeful adaptive system (Haeckel, 1999).

Haeckel's (1999) framework is theoretical although he explained how to apply the different aspects using case studies. The descriptions and framework are detailed and researched and may be too complicated for the designated audience (i.e. laymen managers and leaders). This said, the researcher believes the framework to be efficient covering various aspects involved in building an HPO. Haeckle's (1999) HPO model was not sufficiently substantiated by empirical research.

Beam (2000) believed Haeckel's sense-and-respond model offers clear advantages for responding to discontinuous change, even though there are few examples of sense-and-response organisations presently available, and none in pure form. The examples do however include an Australian bank, a South African insurance company, General Motors, and his own executive development unit at IBM. Therefore, the focus is broader than some of the other sources reviewed. Executives of organisations can use Haeckle's (1999) model to think about strategy in a new light. Gaddis (2000) ascertained that Haeckle's (1999) model incorporated ideas at the frontier of developments in complexity theory and technology and corresponds closely to early strategic thinking by the military about the distinctions between strategy, tactics, and operations. Haeckle's (1999) account describes the pioneering experiences of various large companies and their struggles to build and operate generically adaptive organisations within widely disparate businesses.

2.3.14 Hidden Value

O'Reilly III and Pfeffer (2000) researched eight remarkable organisations that succeeded by successfully managing to engage the emotional and intellectual resources of their people. Their focus was not to win the war for talent but by using the talent and unlocking the motivation of the people they already have in their organisations. They believe that underlying the oft-stated cliché that 'people are our most important asset' is a deeper truth: To the extent that any organisation can truly unleash the hidden value in its people, it will increase its chance of success.

According to O'Reilly III and Pfeffer (2000) people-centred organisations have the following:

(a) A clear, well-articulated set of values that are widely shared and act as the foundation for management practices that build the core capabilities that in turn provide a basis for the organisation's competitive success.

(b) A high degree of alignment and consistency in the people-centred practices that express its core values. People-centred practices include the following:

    a. Strong culture – clear and consistent alignment among values, the norms that express these values (the culture), and specific attitudes and behaviours that are based on these values and that build core capabilities.

    b. Hiring for fit – design screening processes that help identify people who will fit in and screen out those who do not share the organisation's values.

    c. Investing in people – provide opportunities for development and career growth.

    d. Widespread information sharing – sharing operational and financial data with employees and trusting they are capable enough to understand.

    e. Team-based systems – collective responsibility.

    f. Rewards and recognition – intrinsic rewards (fun, growth, teamwork, challenge, and accomplishment) rather than monetary rewards.

(c) Senior managers are leaders whose primary role is to ensure that the values are maintained and constantly made real to all the people who work in the organisation (O'Reilly III & Pfeffer, 2000).

The focus in O'Reilly III and Pfeffer's (2000) research is mostly on how people assist in transforming an ordinary organisation into an HPO. The authors mention the cliché of people

being an organisation's biggest asset and it rings true because without people there would be no organisation. The authors' work was however not sufficiently substantiated by empirical research.

Harville (2001) contended that the authors convincingly asserted that winning companies fully use the talent of their employees and that intellectual capital and knowledge are increasingly important. Senior management are given the role of managing the values and the culture of the firm when this values-based view of strategy is applied. The eight case studies applied strongly support the authors' model. Similarities in the case studies could help researchers to help build theories. The authors highlight the importance of values being aligned with business strategy for the model to work. The case studies are evident that the organisations greatly outperform competitors who are bogged down in hierarchy, rules, and buck passing. Anonymous (2000) asserted that this work proves that concentrating on 'soft issues' like employee values can provide an organisation with the competitive edge.

2.3.15 Good to Great

Collins (2001) conducted extensive research for five years, looking at organisations that made the leap from good results to great results and sustained those results for at least 15 years. He found that there was no miracle moment in each of these dramatic, remarkable, good-to-great organisational transformations. Instead a framework – a down-to-earth, pragmatic, committed-to-excellence process kept each organisation with its leaders and people on track over a long period of time. Steadfast discipline within the framework prevailed over the quick fix.

Collins's (2001) framework of concepts for taking organisations from good to great can be illustrated as follows:

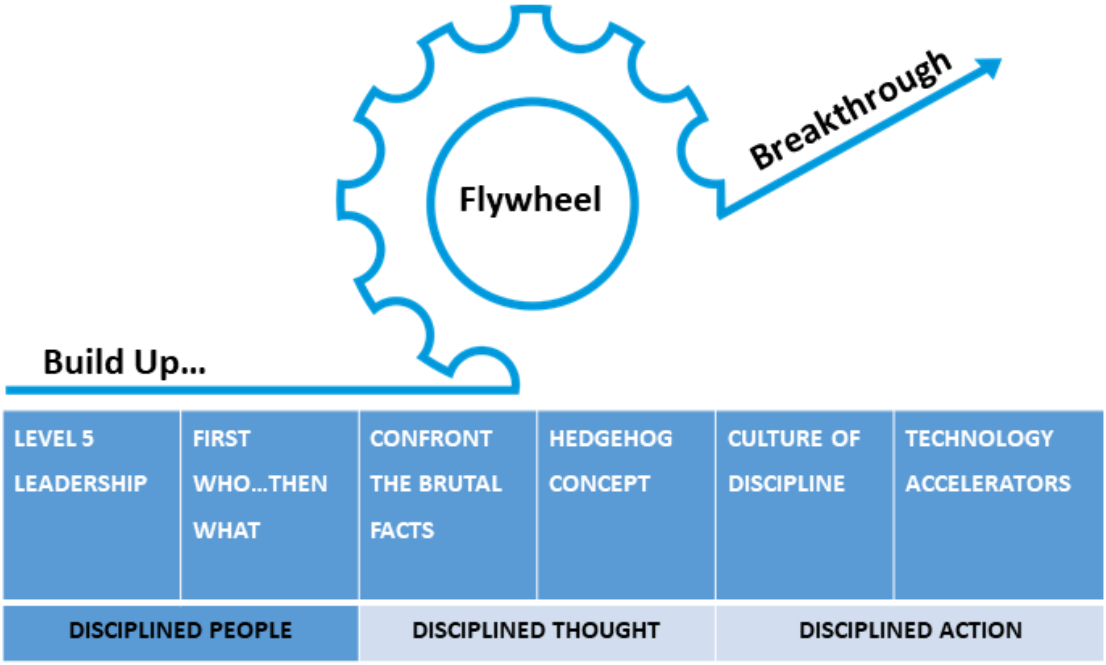


Figure 2.4. Framework for taking organisations from good to great (Adapted from Collins, 2001, p. 17)

According to Collins (2001), good-to-great leaders need to understand three simple truths when getting started, using a bus-analogy, the three truths are described: (a) When you begin with 'who' the adaptation to a fast-changing world is easier. When people board the bus principally because of all the other great people on the bus, you'll be much faster and smarter in responding to changing conditions, as opposed to people getting on the bus because of where they think it is going and 10 miles down the road you have to change direction because the world has changed; (b) When you have the right people on the bus there is no need to worry about motivating them because the right people are self-motivated: nothing beats being part of a team that is expected to produce great results; and (c) Nothing else matters when you have the wrong people on the bus. Even though you might be headed in the right direction, you still will not achieve greatness because great vision with mediocre people still produces mediocre results.

Collins' (2001) concepts in his framework are described as follows:

a) ***Level 5 Leadership***: Leaders are self-effacing, quiet, reserved, and even shy – a paradoxical blend of personal humility and professional will.

b) ***First who…then what***: Good-to-great leaders would first get the right people on the bus, the wrong people off the bus, and the right people in the right seats – and *then* they figured out where to drive it.

c) ***Confront the brutal facts (yet never lose faith)***: Every good-to-great organisation embraced what they called the Stockdale Paradox: You must maintain unwavering faith that you can and will prevail in the end, regardless of difficulties, and at the same time, have the discipline to confront the most brutal facts of your current reality, whatever they might be.

d) ***The Hedgehog Concept (simplicity within the Three Circles)***: Going from good to great means transcending the curse of competence – just because something is your core business and you have been doing something for years or decades, does not necessarily mean you are the best in the world at it. If you cannot be the best in the world at your core business, then your core business absolutely cannot form the basis of a great company. It must rather be replaced with a simple concept that reflects deep understanding of three intersecting circles.

e) ***A culture of discipline***: Few organisations have a *culture of discipline*. You do not need hierarchy when you have disciplined people. You do not need bureaucracy when you have disciplined thought. You do not need excessive controls when you have disciplined action. When combining a culture of discipline with an ethic of entrepreneurship, you get great performance.

f) ***Technology accelerators***: Good-to-great organisations think differently about the role that technology plays – it is never used as the primary means of igniting transformation.

g) ***The Flywheel and the Doom Loop***: Good-to-great transformations never happen in one fell swoop – rather, the process resembles relentlessly pushing a giant heavy flywheel in one direction, turn upon turn, building momentum until a point of breakthrough and beyond.

Collins's (2001) book was a breakthrough on this front as it was based on volumes of research and analysis. The study was done consistently and over an exceptionally long period of time. An interesting concept is the one of 'discipline' on three fronts, namely disciplined people, disciplined thought, and disciplined action. However, this is not discipline in the 'old-fashioned' sense of the word where managers need to babysit their people and be ruthless in their management but rather referring to having self-discipline and flexibility on all levels. When an organisation can develop a culture of discipline, people can have simultaneous freedom and responsibility, that is they do not need to be micro-managed and they do not need forced motivation (James, 2012).

Belt (2008) reviewed Collins' (2001) book and believed the successful companies discussed in the book indicate that their development is evolutionary and not revolutionary. Step-by-step changes are implemented, while new insights gradually accumulate for further improvements. The organisations in this book focused primarily on their business processes. They were aware that they needed to deal with matters in a fundamentally 'different' way. Niendorf and Beck (2008) are of a different opinion. In their critique of Collins' (2001) book, they contended that two fundamental research design errors occur (i.e. data mining and mistaking association for causation). They are of the view that Collins' (2001) research did not show that the five principles led to sustained great results but rather it showed that only the 11 firms had these principles in common during the specific time period studied by Collins (2001). They therefore concluded that there was no evidence that applying the five principles to other firms during other time periods will lead to anything other than average business performance. Resnick and Smunt (2008) confirmed the latter view, which is that Collins' (2001) study suffered from three major problems: (a) data mining in terms of the selection of the starting month of the company transformation period, (b) the sustainability of greatness over subsequent time periods was not tested, and (c) modern portfolio theory that accounts for the cost of risk and then whether the performance differences are statistically significant, was not utilised. Walker (2006) noted that Collins' (2001) message was only part of the puzzle, the question is: How big a part? He encouraged someone to take Collins' (2001) analysis a step further and identify some new consistencies or important inconsistencies to explain what caused these 11 companies to move from good to great, other

than leadership. The researcher is of the opinion that although Collins (2001) made a huge contribution, data mining may have had an influence on the results and applicability, and questions how long-term sustainability in this regard can be achieved.

2.3.16 Creative Destruction

Foster and Kaplan (2001) believed that all organisations develop in the same way, according to the following stages: (a) *Foundation* – start-up phase, success happens or it does not, little self-reflection about why, day-to-day work in all-consuming; (b) *Growth* – usually rapid, market share increases; (c) *Dominate* – the organisation has come of age, they have scale, resources, talent and insight; (d) *Cultural lock-in* – organisation fights for survival, cuts costs, fear; and (e) Survival then depends on whether the organisation recognises and embraces the prospect of discontinuity.

In other words, according to Foster and Kaplan (2001), when organisations are established, a certain organisational culture develops. Cultural lock-in then occurs a few years into the organisation's existence, which refers to the inability to change the corporate culture even in the face of clear market threats. This is the reason organisations find it difficult to respond to the messages of the marketplace. The gradual stiffening of the invisible architecture of the organisation, the ossification of its decision-making abilities, control systems and mental models leads to cultural lock-in. This then dampens the organisation's ability to innovate or to shed operations with a less-exciting future – the first indication of inferior performance and inevitable decline of the organisation.

Cultural lock-in occurs as a result of the formation of hidden sets of rules or mental models, which, once formed, become extremely difficult to change. Mental models are the core concepts of the organisation, the beliefs and assumptions, the cause-and-effect relationships, the guidelines for interpreting language and signals, the stories repeated within the corporate walls. Mental models are invisible and pervasive. Well-crafted mental models allow management to anticipate the future and solve problems, however, once constructed, they

become self-reinforcing, self-sustaining and self-limiting. When mental models are out of sync with reality, they cause management to make forecasting errors and poor decisions. One of these disconnects with reality is the assumption of continuity, which leads organisations into flawed forecasting and poor decisions (Foster & Kaplan, 2001).

When organisations find themselves in a cultural lock-in, Foster and Kaplan (2001) suggested they create and change mental models through the extended and informal process of corporate dialogue. This is done by applying divergent thinking (i.e. focusing on broadening the context of decision-making). It is initially more concerned with questions then getting to the answer in the fastest possible way. Divergent thinking values getting the questions right, and then relinquishes control to conventional convergent thinking processes (i.e. clear problems with quick, well-known solutions).

Foster and Kaplan (2001) believed that by the year 2025, the average length of time a company resides on the Standard & Poor's 500 Index, will be no more than ten years, compared to twenty years today. The pace of change is accelerating, and survival is no guarantee of performance. Organisations therefore have to consider the following: (a) Invisible architecture that fosters creation, operations and trading; (b) Technical versus adaptive work; (c) Setting standards for management effectiveness; (d) Applying divergent thinking, that is pick the right people, allow adequate preparation time, set high aspirations, provide resources, flexibility and deadlines, and provide senior coverage; (e) Design the strategic planning process, that is overall process design, preparing for the first dialogue and designing and conducting the first conversation; (f) Reconceptualising Research & Development; (g) Reconceptualising corporate venture capital; (h) Balancing control, permission and risk, that is determine what to measure and control at various levels, measure and control what you must, increase flexibility of information systems, increase permission for experimentation, change the range of reward and risk in the incentive system to reflect and amplify permission, establish a process for ongoing senior support, with a focus on its impact on divergence and creation; and, (i) Setting the pace and scale of change, that is reflect on the process and assess the results.

This research seems to focus more on bringing back to life organisations on the verge of self-destruction, than building of HPOs. Bringing an organisation back from the edge may or may not lead to high performance. The research is not optimally structured, and it is not clear exactly what all the steps are in achieving high performance. The authors also did not indicate whether the steps are applicable in any organisation. Their research was not sufficiently substantiated by empirical research.

Drezen (2001) believed the authors' conclusions were not novel but rather repetitive. They reflected on 'corporate Darwinism' – destruction is a mechanism that allows the market to maintain freshness by eliminating those elements that are no longer needed. Anonymous (2002) maintained that, although the authors' advice was familiar, fresh insights into strategy was offered. Zaleski, Abbott, Gold, and Rotella (2001) asserted that the authors raised significant questions about how organisations should define long-term success. They embarked on painstakingly researched and well-documented work.

2.3.17 The Agenda

Hammer (2001) identified nine agenda items that assist in building an HPO, all with the underlying, key assumption that customers are more powerful than ever. The agenda items are:

1. *Agenda item 1: Make it easy for your customers to do business with you*

   Important points to consider are: A single face should be presented to customers, work in different ways for different classes of customers. Know what your customers will ask for before they do. Make your customers' experience a seamless one. Let customers do more for themselves. Measure the things that customers really care about.

2. *Agenda item 2: Add more value for your customers*

Important points to consider are: Think of yourself as a provider of *solutions*, rather than of products or services. Distinguish between what you are selling and what your customer is buying. Take a broad view of your customers' underlying problems that go beyond you and your products. See what your customers do with what you give them, and either do it for them or help them with it. Price in terms of value rather than cost.

3. Agenda item 3: Create a process enterprise

Important points to consider are: Obsess about the end to end processes that create value for your customers. Ensure that every person understands these processes and their role in them. Appoint senior process owners to measure, manage and improve the processes. Create a process-friendly company by aligning facilities, compensation and structure around processes. Develop a culture of teamwork and shared responsibility. Set up a process council so as to not replace functional silos with process owners. Manage in process terms everything you do to make the organisation better. Make process into a way of life.

4. Agenda item 4: Tame the beast of chaos with the power of process

Important points to consider are recognising champions and heroics for what they are: signs of dysfunction. Leverage your people's creativity with the power of process. Make innovation repeatable through detailed process design. Do not let people tell you that creativity conflicts with process. Be resolutely committed to discipline and teamwork. Accept the fact that not everyone will get it.

5. *Agenda item 5: Base managing on measuring*

Important points to consider are: Take measurement out of accounting and make it part of every manager's job. Abandon the measures you have inherited from the past. Develop a model of your business that links your overall goals to specific things you control. Put in place measures and targets for the key items in this model. Design measures that are objective, timely, easy to calculate, and easy to understand. Make ongoing performance improvement inevitable by incorporating it into a disciplined measurement-based process. Let facts and measurements triumph over intuition and opinion.

6. *Agenda item 6: End the tyranny of the organisational chart*

Important points to consider are: Challenge the idea of sharply defined business units with autonomous managers. Redefine managers as representing markets, products, or processes, rather than having total control over them. Make managerial teamwork and cooperation the rule rather than the exception. Teach managers to put the needs of the enterprise as a whole, first. Employ rewards that emphasize the group over the individual. Substitute inspirational leadership for a formal structure.

7. *Agenda item 7: Distribute for, not to, the final customer*

Important points to consider are: Make maximizing value and minimizing cost for the final customer your number one priority. Turn your distribution channels into communities that work together for common goals. Use the Internet to share information and streamline transactions. Ensure that each community participant is doing what it does best. Drive out redundant work, especially the repetitive buying and reselling of product. Be prepared to redefine traditional roles in unconventional ways.

8. Agenda item 8: Redesign and streamline interenterprise processes

Important points to consider are: Root out the remaining sources of overhead, cost and inventory by redesigning inter-enterprise processes. Streamline the connections between your processes and those of your customers and suppliers. Relocate work between companies so that it is done by whoever can do it best. Coordinate through open sharing of data between companies. Exploit the opportunity of collaborating with co-customers and co-suppliers. Face head on the deep cultural challenges of inter-company cooperation and information sharing.

9. Agenda item 9: Embrace the radical vision of virtual integration

Important points to consider are: See your business not as a self-contained company but as part of an extended enterprise of companies that work together to create customer value. Define your company in terms of the processes that you perform, not the products or services you create. Identify and strengthen the key processes at which you excel. Outsource everything else to someone better equipped to do it. Learn to work closely with others; not just on your own. Be prepared to rethink your organisation's identity and strategy in fundamental ways.

Hammer (2001) warned that implementing the nine items on the agenda is not all it will take for an organisation to succeed, because the world is changing rapidly. Therefore, the agenda is not fixed but open-ended. New technologies arise daily, customer needs change in unpredictable ways. The agenda will never be exhausted. Implementing the agenda is not a one-time effort but an ongoing responsibility. This begs the question: How do you handle this responsibility? The answer is to shift the definition of planning. It no longer makes sense to plan by predicting the future and then, in response to what the predictions revealed, create detailed plans that could be reliably executed. Today planning must assume that the future cannot be predicted – only prepared for. Therefore, the way to cope with rapid change is to create a highly adaptable organisation that obliterates time lags – it never looks ahead. It operates entirely in the present; it handles new agenda items the moment they appear.

Hammer (2001) argued that it may seem impossible but is that it was possible to make an organisation resilient in the face of unrelenting change, by taking three concrete steps: (a) Create an early warning system to spot changes to which you must respond quickly; (b) Become adept in rapidly designing and installing the new ways of working that such external changes demand; and (c) Create an organisational infrastructure that supports both of the first two.

Hammer's (2001) work is process and customer driven. The framework is quite structured and clinical and seemingly left little room for the human element. None of the 'airy-fairy', 'soft' elements are present here, rather the focus is on formal and structured processes, group- / teamwork focuses on the customer, with little space left for leaders to practice autonomy and provide inspiration to their subordinates. This approach may be too rigid with little margin for error. There are some touch points with other research focusing on creating an agile, adaptive organisation (i.e. Haeckel, 1999) that can quickly and sufficiently respond to the changing world of work. Hammer's (2001) work was not sufficiently substantiated by statistical research.

Frost (2001) contended that Hammer (2001) acknowledged that the work is hardly set in stone as changing times will add items to it as soon as you take others off. However, companies must work hard toward these principles as they adapt to the economic environment, therefore it is implied that it is an ongoing responsibility. Hammer's (2001) approach paved the way for the Internet revolution.

2.3.18 Strategic renewal

Mische's (2001) focus was on understanding what it took to be a high performance organisation, as well as to establish high performance and strategic renewal as strategic doctrines. The five pillars of strategy were applied to achieve superior performance and outstanding competitive advantage: that is:

a) High performing organisations share five common strategic traits and qualities, irrespective of industry, age, or size. These strategic pillars are information technology, innovation, leadership, knowledge, and operational excellence and agility. When these pillars are integrated with strategy, great products, profits, and market position will follow.

b) High performing organisations gain massive leverage from the selective integration of the five pillars of strategic renewal and high performance. All five pillars are important and are continuously cultivated.

c) High performing organisations design their strategies and organisations for leverage, high performance, and success, all the while striving from organisational and operational integration and collaboration with both selected partners and, from time to time, with competitors.

d) High performing organisations understand that traditional methods of strategic planning that highlights industry structural analysis are no longer effective. Things have changed, today, suppliers are partners, competitors are collaborators, customers are vocal and engaged and employees have options.

e) High performing organisations still recognise that size and presence are important, however, the sources of competitive advantage (i.e. size, industry positioning, leverage with suppliers and customers and geographical location) have given way to new sources driven by agility and the convergence of innovation, knowledge, and technology.

The five pillars of High Performance Strategy can be illustrated as follows (Mische 2001):

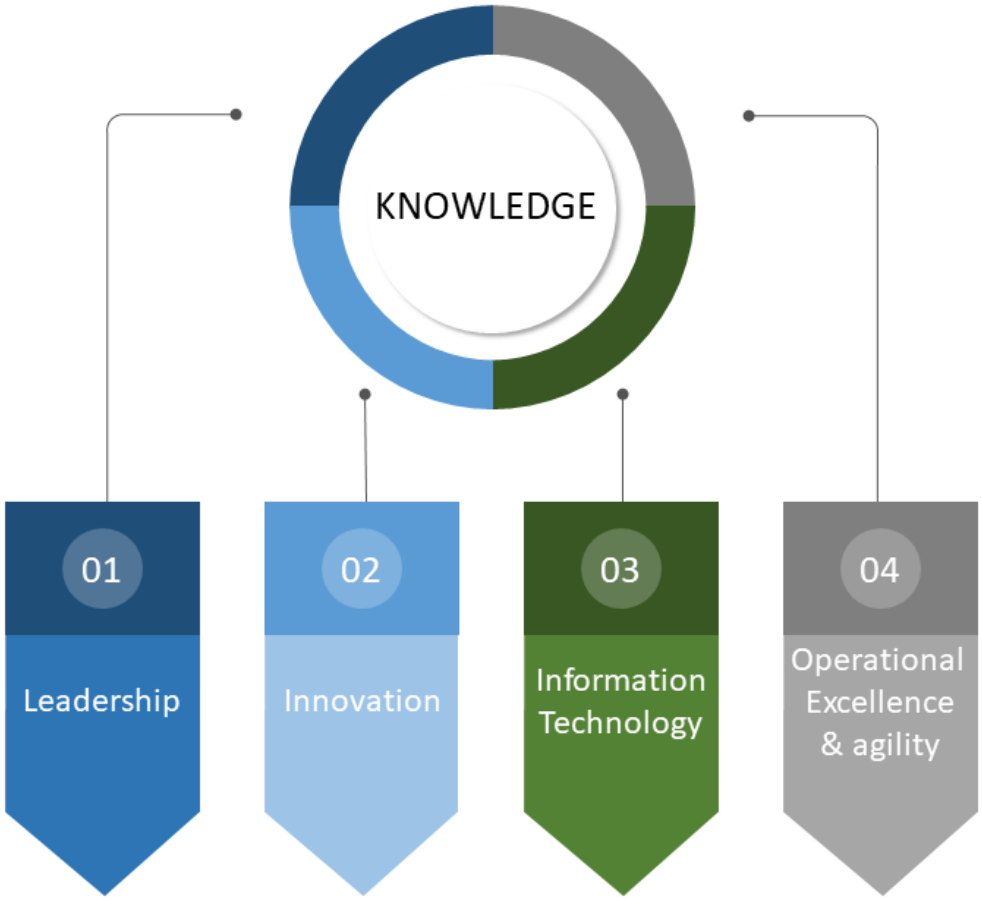


Figure 2.5. The five pillars of high performance strategy (Adapted from Mische, 2001)

Mische (2001) also examined three major forces that are shaping the competitive arena of the future: globalisation, information technology and workforce diversification and mobility.

Business architecture for high performance organisations is defined as (Mische, 2001, p. 234):

> *A comprehensive plan for the realization of high performance through the integration of the organisation's resources and competencies in a manner that optimises and leverages their use, deployment, and interactions to an existing or intended environment.*

High performance architecture illustrates how the major components of the organisation interact with one another to create synergy of purpose and high performance. In designing a framework for integrating the five pillars of strategy to create an HPO, five critical factors have to be considered: (a) The architecture of a high performance organisation is the result of deliberate design for selective integration; (b) Clear congruency to the purpose, strategy, and economic goals of the organisation must be indicated; (c) The architecture must be built to either harmonise with, optimise or redefine its operational environment; (d) Architectures are linked to and supported by plans which are both tactical and strategic; and (e) The five pillars of strategy and strategic renewal is used as a basis for integration in the architecture (Mische, 2001).

A framework for architecting for high performance (Mische, 2001):

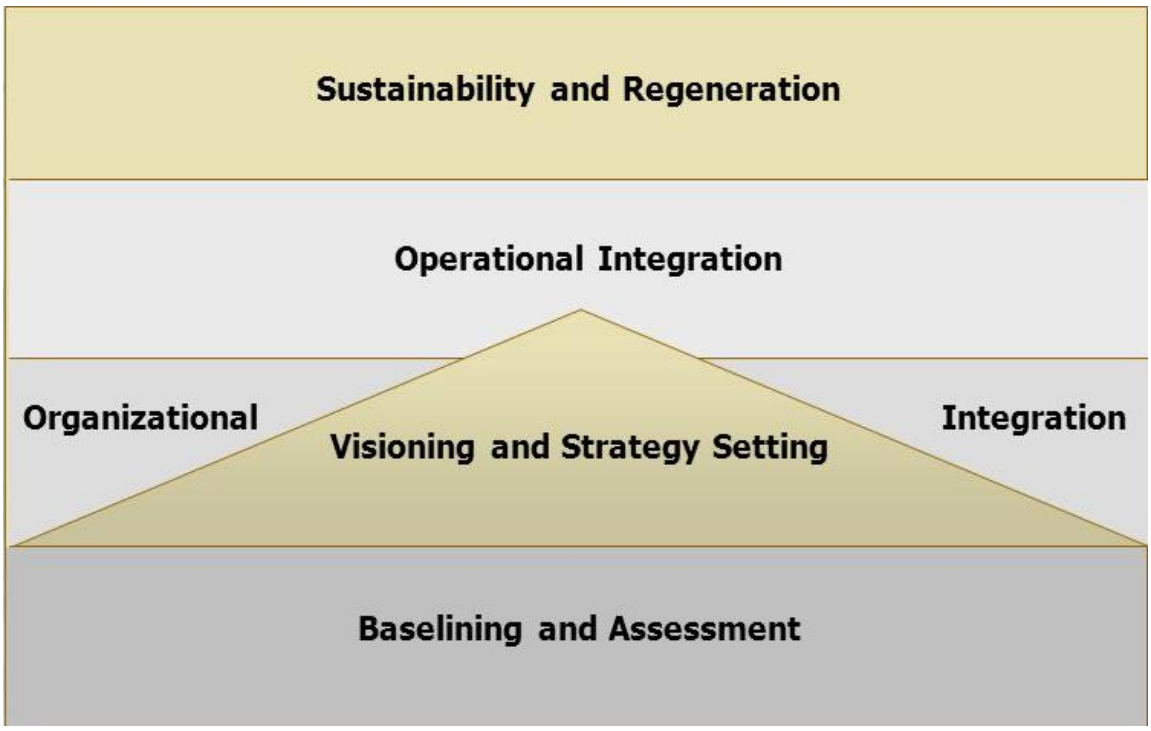


Figure 2.6. A framework for architecting for high performance (Mische, 2001)

Mische (2001) discussed these points in detail as follows:

a) *Business baselining and evaluative assessment:* As a starting point, the organisation has to assess itself, its processes, its environment and its competencies. It must analyse its strengths and weaknesses in comparison to other HPOs.

b) *Enterprise visioning and strategy setting:* The organisation must create or confirm a comprehensive vision and strategy or set of strategies. In designing an integrated business architecture, strategy can drive the design, or the design of the organisation and its ability to integrate its operations can drive the strategy. The terms and approach are, to a large extent, determined by the environment or intended environment and organisational resources.

c) *Organisational integration:* New organisational practices must be designed, and internal competencies added or upgraded. This part can be conducted alongside the design of new business processes and concepts related to operational excellence and organisational agility.

d) *Operational integration:* The creation of new business process designs that integrate innovation, technology, performance measures, and organisational capabilities is required when designing for operational excellence. It involves continuous development, testing, refinement, further development, and successful deployment.

e) *Sustainability and regeneration:* Constant renewal and regeneration is at the order of the day when aiming for high performance. The organisation is focused on a continuous process designed to help keep the organisation functioning as a high performer.

Mische's (2001) research is detailed and focuses on relevant business factors which affect all major organisations. The author gives an illustration of the business architecture required to create high performance which can be used as a basis or general blueprint. However, a lot of thinking is required to ensure adaptability to one's own organisation. Mische's (2001) work was not sufficiently substantiated by empirical research.

2.3.19 The Distinguishing Profile

Osborne and Cowen's (2002) research suggested that high performance organisations are intrinsically different from run-of-the-mill performers. They looked at large and small businesses, high-tech and low-tech, with commodity products and propriety products. Organisations that sustain exceptional growth and profits possess a remarkably similar mind-set, regardless of line of business or size. They have a profile that includes distinctive characteristics of corporate culture, the people and management systems.

a) The culture of high performance

Osborne and Cowen (2002) identified seven attributes that differentiate the culture of high-performing organisations: (a) *Emotion-packed vision* – a simple, compelling vision for the future, easy to understand that resonates with employees; (b) *'True believer' mentality* – everyone believes in the vision of the business and that it will bring certain success; (c) *Plain vanilla values* – simple values, often grounded in some emotional appeal; (d) *Pride and dissatisfaction* – complacency does not work, employees ask themselves how they can do better; (e) *Peer respect* – not using fear to motivate employees but the urge to earn and maintain the respect of one another governs high performing organisational behaviour; (f) *Long-term relationships* – high-performing employees believe and expect that long-term relationships are the path to personal success; and (g) *Fun* – high performing workplaces are filled with fun.

b) The people

Osborne and Cowen (2002) recognised the following behaviours of high performing organisations: (a) *Maintain a 'can-do' attitude* – preoccupation with defensive strategies and endless analysis of the downside of initiatives are forbidden; (b) *Crush the competition* – high performers are obsessed with beating the competition, their incentive systems foster competition; (c) *Hang tough* – emotional toughness is a badge of honour in high performing organisations; (d) *Be the best in the business* – high performers recruit

the best people but also invest in their continuous training and development; (e) *No excuses* – no excuses or finger pointing, problems are for solving, not endless explanation; and (f) *The boss is a colourful character* – there is a tendency in HPOs for the CEO to exhibit a few unusual attitudes, to be unreasonable in some of their beliefs, and to be strongly opinionated in ways that are not entirely endearing.

c) The management systems

Osborne and Cowen (2002) believed that superb execution is what separates HPOs from middle-of-the-road competitors. The characteristics discussed above virtually all relate to attitudes that facilitate the implementation rather than the formulation of strategy. Complementing those attitudes is a management system which focuses on execution of the highest order and are founded on three uncompromising principles, namely: (a) *Precise expectations / measurement / frequent feedback* – the centrepiece of high-performing management systems is wide open, highly defined communication about expectations. Everyone knows precisely what is expected of them, how they will be measured and how they are doing. A huge sense of urgency about superb execution is instilled. However, the system of expectations, measurement and feedback is flexible, designed to adapt to changing strategies and the competencies of the people who carry them out; (b) *Performance is king* – CEOs of high-performing organisations anoint employees who deliver superior results as heroes; and (c) *Truth is told* – employees who tell the truth, who deliver bad news faster than good news, are rewarded, not punished, in high-performing organisations. Everyone, from entry level to senior executives, is kept fully informed about what is happening with the organisation.

The article is to-the-point, clear and efficient. Their study does, however, not discuss in detail how they performed the research, how many organisations they studied or what their approach was. Osborne and Cowen's (2002) work was not sufficiently substantiated by empirical research.

2.3.20 Thinking inside the box

Cheyfitz (2003) believed, in business, it is essentially wasteful to search for some revolution that will change everything – the relentless insistence on 'thinking outside the box'. Not genius, nor constant invention (or reinvention) is required to manage an enterprise; good management largely consists of paying attention to history and present reality while working hard and applying prudence. Management is a set of skills to be learned, as opposed to divine inspiration or magical foresight, and the list of requisite skills has been consistent over a long period of time.

Cheyfitz (2003) referred to these unchanging, timeless rules collectively as "The Box". 12 boxes were identified, each with its own set of rules, which is illustrated in Table 2.2:

Table 2.2

The Box (Adapted from Cheyfitz, 2003)

Box		Rule
1.	The Basic Box: Some things never change	Know the difference between what will change and what will not and pay attention to the former
2.	The Jack in The Box: Profits	The first business of business is making money
3.	The Money Box: Cash is Everything	If you do not manage your cash, you will not be managing anything for long
4.	The Bottom-Line Box: Knowing what can be controlled and what cannot	It is far better (and more certain) to cut expenses than to pray for sales
5.	The Box Top: Customers are the Boss	Give customers what they want, not what you want to give them
6.	The Marketing Box: Unifying the Whole Business	You should be selling all the time
7.	The Getting-Bigger-Faster Box: If You Can Buy It, Do not Start It Up	Follow the example of virtually every big company in history and buy your way to bigness (at reasonable prices)
8.	The People Box: Hire Smart or Manage Hard	When it comes to people, you can hire smart and get out of the way, or you can run around micromanaging
9.	The Treasure Box: Secure the Real Assets	Find your business's real assets (the ones that generate your profits) and exploit them for all they are worth
10.	The Ends-Over-Means Box: Results Are More Important Than Process	Remember that the end result is what really matters
11.	The Renewable Box: Nothing Lasts Forever	Always be ready to renew your basic business.
12.	The Houdini box: Always Have an Exit Strategy	Make a plan to get your money out, and keep the plan updated and handy

Cheyfitz (2003) also described how to build each box and provided guidelines for the reader, which assists with implementation of the boxes. The belief is that one cannot think outside the box if one does not have a really good box to think outside of, thereby recognising the apparent paradox that out-of-the-box thinking is inside The Box – or at least, begins there.

Cheyfitz (2003) reverted to basics believing that innovation and reinvention is not necessarily crucial to build high performance. Going back to what has always worked is good enough, that is there is nothing new under the sun. As a result, the research is straight-forward, understandable, and easy to implement by following the guidelines provided. The author used several carefully documented examples to illustrate beliefs and convince the audience. Cheyfitz (2003) did not discourage innovation; nor was it implied that organisations should not innovate – organisations should rather look at old things in new ways. Cheyfitz's (2003) work was not sufficiently substantiated by empirical research.

Hurst (2003) contended that Cheyfitz's (2003) rules are down-to-earth and focus on basic business principles such as giving customers what they want and managing your cash. Current corporate innovations were compared with past business practices throughout history and the fact was highlighted that, in many ways, things have not changed that much. There is however a need to stay focused on the things that really matter in a business, such a staying solvent, while avoiding the latest management fads and pitfalls.

2.3.21 The Evergreen Project

Joyce, Nohria and Roberson (2003) embarked on what they referred to as 'The Evergreen Project', from 1986-1996. Fifty leading academics and consultants used well-accepted research tools and procedures to identify, collate, and analyse the experience of dozens of organisations over a ten-year period. They statistically and rigorously searched for the key to 'evergreen' business success. Starting out with 200 management principles, they systematically whittled these down and ended up with eight – four primary and four

secondary – that directly correlated with superior corporate performance as measured by Total Return to Shareholders (TRS). Organisations with high scores in all four primary areas and any two of the four secondary areas – *4 + 2* – consistently outperformed their competitors and delivered shareholder value.

The Four Primary Management Practices (Joyce et al., 2003) are illustrated in Table 2.3:

Table 2.3

The Four Primary Management Practices (Adapted from Joyce et al., 2003, p. 16)

Primary Management Practices	Description
1. Strategy	Devise and maintain a clearly stated, focused strategy
2. Execution	Develop and maintain flawless operational execution
3. Culture	Develop and maintain a performance-oriented culture
4. Structure	Build and maintain a fast, flexible, flat organisation

The Four Secondary Management Practices (Joyce et al., 2003) are illustrated in Table 2.4:

Table 2.4

The Four Secondary Management Practices (Adapted from Joyce et al., 2003, p. 19)

Secondary Management Practices	Description
1. Talent	Hold on to talented employees and find more
2. Leadership	Keep leaders and directors committed to the business
3. Innovation	Make innovations that are industry transforming
4. Mergers and partnerships	Make growth happen with mergers and partnerships

Joyce et al. (2003) developed a substantial statistical basis for their findings, 160 organisations over a 10-year period. It provides a formula for sustained business success. What set this study apart, was that these researchers also considered the management

principles that do not work and therefore not only focused on what does work, as many researchers do. This step in the research process did not limit the researchers but rather opened the study to also consider negative aspects when developing an HPO.

The study's focus was on identifying the key to 'evergreen' business success; therefore, they only selected organisations that were reasonably equivalent, that is similar to each other in scale, scope, financial numbers, TRS and future prospects. One drawback is that the study did not have a control group of average performers or losing organisations. The researchers considered this but decided that having a control group left out distinctions between causes and effect. They opined that it was not possible to tell whether a successful (in this context) organisation's practice is a key reason for its superior performance. For example, does an organisation's ability to attract exceptionally talented employees play a major role in its superior performance, or has its superior performance attracted those talented employees? For the purposes of this thesis, having a control group would have made the Evergreen Project more robust as the researchers would have been able to determine whether the characteristics really did make a difference.

Joyce et al. (2003) reviewed their own work in 2003 and maintained that their findings took them by surprise and that most of the management tools and techniques they studied had no direct causal relationship to superior business performance. Their review indicated that having a strong grasp of business basics is what matters. They were of the opinion that their research makes it clear why so few companies maintain a steady lead but also offers hope because according to them, the formula informs managers which management practices they need to focus on and which to ignore. Joyce et al. (2003) maintained that the formula works in any business climate and is a true north compass.

2.3.22 Why good companies go bad

Sull (2003) argued that, if initial success is facilitated by a formula, it can attract customers, employees, investors, and imitators. The positive feedback leads to managers believing they

should fortify and extend their recipe through additional investments that reinforce the formula. Time and repetition lead to people taking the formula for granted and not considering other alternatives. The result is that the individual components of the success formula grow less flexible (*active inertia*): strategic frames become blinders, resources harden into milestones, processes settle into routines, relationships become shackles, and values ossify into dogmas. The linkages among the components tend to tighten as well.

Once an organisation has stabilized its formula, it generally attracts and promotes employees who preserve stability rather than firebrands who might shake it up. A factor that increases the odds that firms will concoct similar formulas that reinforce or even accelerate this entrenchment is a geographic concentration of firms in an industry, for example, the dotcoms in Silicon Valley. The subsequent commitments of managers tend to reinforce their tried-and-true formulas (Sull, 2003).

Figure 2.7 illustrates Sull's (2003) approach:

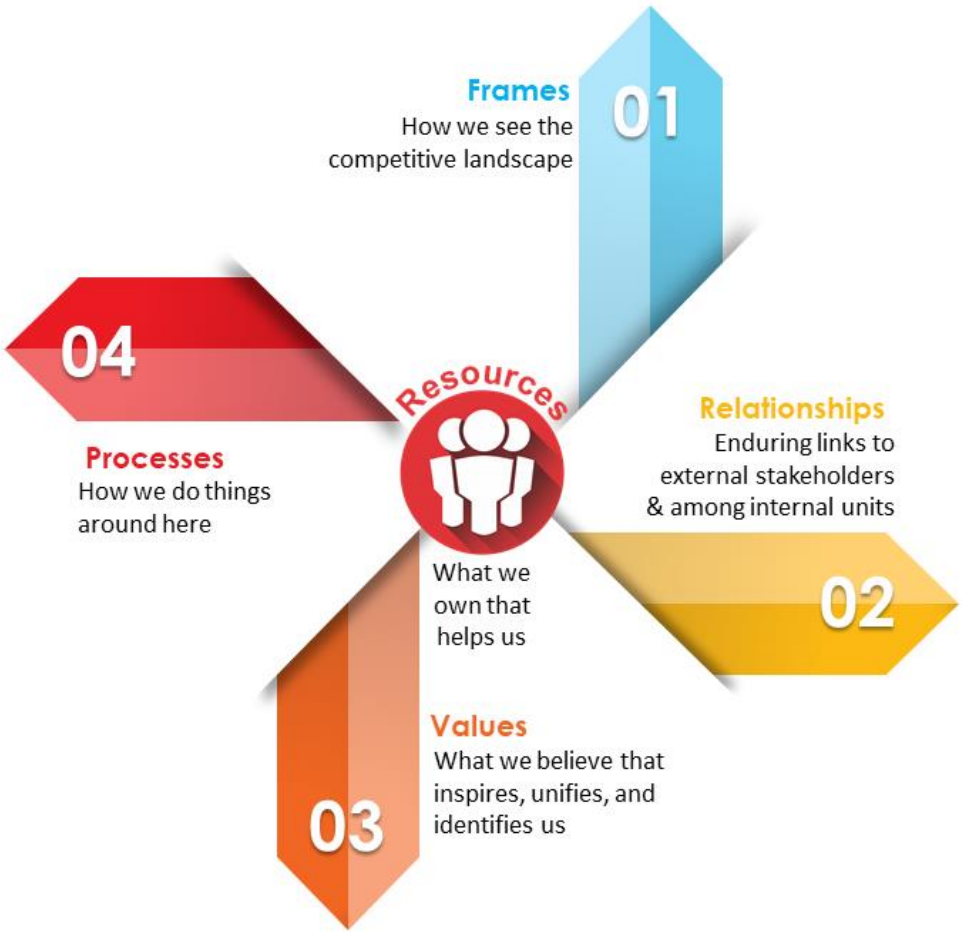


Figure 2.7. An organisation's success formula (Adapted from Sull, 2003, p. 28)

As long as the competitive, technical, and regulatory contexts remain stable, an established formula serves a company well. However, when these contexts shift, a gap can grow between the demands of the competitive environment and the benefits of the existing success formula. The gap is noticed by managers, often at an early stage, and they respond aggressively to close it. Their fossilized formula, however, channels their efforts into well-worn ruts. The harder they work, the wider the gap becomes. The result is active inertia, as illustrated in Figure 2.8 (Sull, 2003):

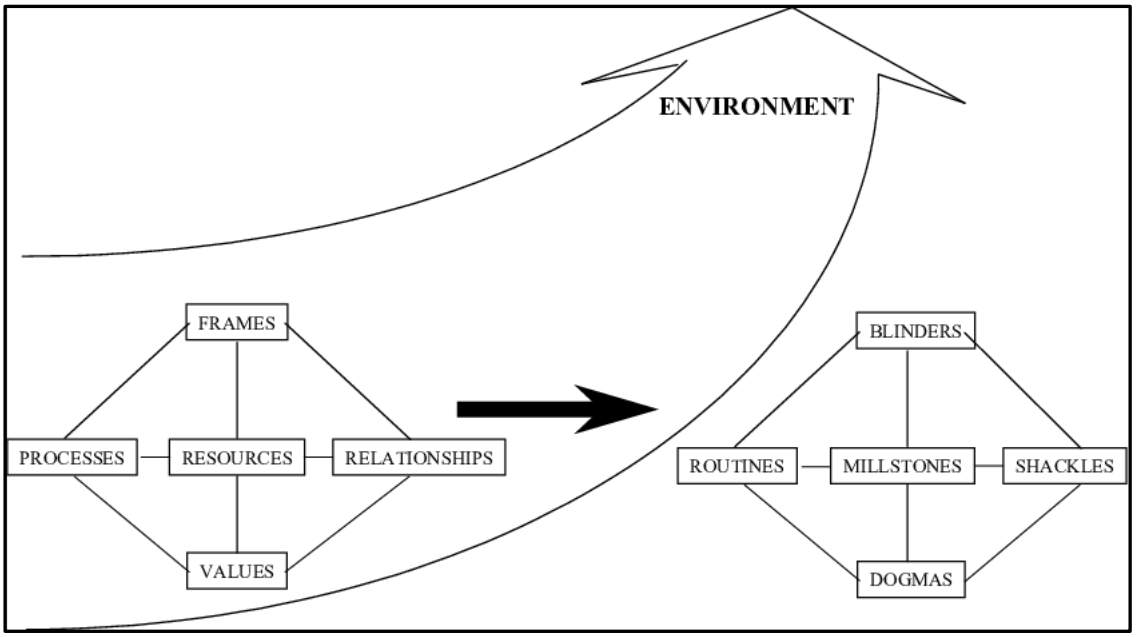


Figure 2.8: The Active Inertia Trap (Adapted from Sull, 2003, p. 29)

Managers often fail to notice just how 'actively inert' their organisation is. On the other hand, diagnosing active inertia is far easier than changing an established success formula. Historical organisational commitments to strategic frames, resources, processes, relationship, and values, individually congeal with time. The solidity of the formula as a whole is reinforced with the tight interdependency among these elements. Success reassures managers that they have found the single best way to compete. With the passing of time, the formula becomes reinforced by a cadre of like-minded managers and it deprives executives of potentially valuable alternatives. Successful managers are publicly linked to their proven formula by monuments like buildings and books. This begs the question whether managers can change their own success formula considering all the forces hardening an organisation's success formula (Sull, 2003).

The answer is through transforming commitments – actions that remake an organisation's success formula by increasing the cost (or eliminating the possibility) of persisting the status quo. Transforming commitments involve the following three steps (Sull, 2003):

1. *Select an Anchor:* An anchor is an overarching objective that guides subsequent actions. Anchors do not need to be inspirational, novel or audacious, most anchors are quite

mundane – technical leadership in the core business, serving a new generation of customers. Effective anchors must only present a clear alternative to the established success formula and fit the situation, not win any awards for creativity.

2. *Secure the Anchor:* To provide the leverage necessary to pull employees out of active inertia the anchor must be secured firmly. If this does not happen, the gravitational pull of the existing success formula will drag the organisation back into the status quo. The anchor can be given traction with new commitments by managers.

3. *Realign the rest of the organisation:* Committing to an anchor exposes obstacles to achieving the new objective. A clear anchor can help managers prioritise their actions by focusing first on the most pressing obstacles to honouring their new commitments. Other issues can wait on the back burner.

Sull's (2003) approach is not an HPO model as such; however, a relatively simple process was proposed for organisations in desperate need of transformation. The three-step process provides a framework that assists managers in prioritising challenges and answering important change management questions. Real life applications of this framework have proven successful which seems to imply that the framework is not just theoretical but also practical in its application. Sull (2003) did warn that transforming commitments do not work in every situation (i.e. when an organisation faces a threat to its core and lacks decent alternatives). Also, they are hard work: selecting an appropriate anchor requires in-depth understanding of the organisation's situation, the pros, and cons of alternative anchors, securing the anchor demands risky commitments, and constant diligence is required when realigning the organisation. Sull's (2003) work was not sufficiently substantiated by empirical research.

Kumar (2007) contended that Sull (2003) proposed a compromise between the evolutionary and revolutionary models: although the revolutionary model can handle the problem of active inertia, however, it will also get rid of other good things in the company, including the delicate ecology of stakeholder relationships which have evolved over a long period of time. The compromise between these two models of change assists the company in rethinking its success formula in the context of a changing environment. Marshall (2003) argued that, when

change is required, companies respond by accelerating their time-tested techniques instead of making tough choices and a 'transforming commitment' required for true revival. This process takes good ideas, good people, and real perseverance.

2.3.23 Contagious success

Annunzio (2004) conducted a study that examined high performance workgroups. High performing workgroups that make money for the business and develop new products, services, or markets, exist in every organisation. The researcher believed that, to increase performance, organisations need to focus on the single factor that is most critical to high performance – the environment of their workgroups. It is also important that organisations know their business and their customers well, however that alone will not produce high performance.

It is therefore important to create an environment where people feel valued, can do their best thinking, and have the space to seize opportunities as they arise (Annunzio, 2004):

a) *Value people* - Showing respect being the most important factor in this regard (i.e. treat smart people as if they are smart people).

b) *Optimize critical thinking* - To think critically, emotions need to be taken out of the way. There needs to be congruity between leaders' words and their actions, between the values that are preached and the values that are lived, and people need to see this happen. They need to believe that the organisation does not withhold critical information necessary to do their jobs.

c) *Seize opportunities* - Organisations need an environment where people have the freedom to seize opportunities as they arise – this will drive high performance.

d) *Build it and they will come* - People who believe they can make a difference will come. If the opportunity is there to do their jobs well, people will stay. But most importantly - if you build the right environment, people will perform.

Annunzio (2004) also identified behaviours that destroy high performance: (a) Showing disrespect such as doing the thinking for smart people, embarrassing with public criticism and humiliating people when they fail; (b) Hoarding information, such as controlling who receives information, protecting from bad news and guarding best practices as proprietary secrets; (c) Micromanaging, such as limiting responsibilities, dictating every expected outcome and telling how you want something done; (d) Avoid responsibility by assuming others will do what is necessary, waiting to be asked and blaming others for mistakes; (e) pursing personal agenda by seeking personal gains, focusing on your own success and never sharing credit; and (f) undervaluing learning by eliminating training and hiding what you learn.

Annunzio (2004) approached high performance in a simplistic way, that is not too many aspects to achieve high performance. What sets the research apart from others is that the author identified behaviours that destroy high performance, that is what *not* to do. Annunzio's work, however, was not sufficiently substantiated by empirical research.

Anonymous (2004) pointed out that this research study does not prove something new, which is that approximately 10% of workers are the most productive and leveraging this talent by having them share what makes them so successful in the workplace with employees who are almost as good. Annunzio (2004) also encouraged senior managers to stay away so that learning can happen. Hooper (2004) supported the worldwide research Annunzio (2004) and group conducted into how to define and secure high performance environments that deliver exceptional results. The premise of the research was: success in contagious and when the small group of high performers share their styles and techniques, it can be adapted by lower-performing workers. Conley (2005) stated that the research was about people, however it promoted micromanagement as the key to success. The case studies do not feel like brilliant strategy, but rather like common sense or necessity. Annunzio's (2004) central success-as-a-virus argument has one primary flaw: companies can only be as good as their best existing workgroup.

2.3.24 The four pillars of high performance

A robust strategy that will succeed in a variety of scenarios is not enough to achieve high performance. Another requirement is an organisation that is among the first to sense a change in probabilities across the range of possible futures; among the fastest to deploy resources against threats, surprises, and opportunities, among the most creative in forging a presence in the evolving future; and among the very best in moving as a whole into whatever the ever-evolving future holds. These organisations are robust, that is they are alert to change, agile in deployment, adaptive in practice and product, and aligned in purpose (Light, 2005).

Light (2005) identified four pillars of robust organisations as follows:

a) Alertness

Organisations are alert to see the change coming, they pay attention. Robust organisations think in futures (*plural*) tense and accept the inevitability of surprise. This involves adaptive planning techniques as well as rigorous monitoring and evaluation which involves quality measurements (a mix of measures to illustrate the fullest possible portrait of success). They focus on the direct, indirect, and cascading effects of what they do.

b) Agility

Workforces are recruited for maximum flexibility, while organisations train for agility by drawing the right lessons from the past. The cost of learning is reduced and ‘corporateness’ are cultivated. Just-beyond-possible goals are set, and employees have the authority to act while thinking lean about every aspect of work.

c) Adaptability

Robust organisations create both the freedom to learn and the freedom to imagine. By creating teams and networks, expertise is aggregated. Scorecards are unbalanced by measuring in future tense and multiple measures are used to avoid complacency and cheating, as well as being careful about what is measured.

d) Alignment

Robust organisations lead to mission and do this by growing and grooming their own leaders from within. These organisations lead in futures and communicate through stories and images. They carefully study and assess their adversaries to anticipate their movements. They ignore irrelevant issues that hamper command.

Furthermore, Light (2005) discussed lessons on change management. Six suggested steps are identified for managing change and improving the odds of success: (a) Create a sense of urgency; (b) Remove the barriers to success; (c) Recruit the champions; (d) Build internal momentum; (e) Prove that change works; and (f) Keep experimenting.

Light's (2005) HPO framework consisted of four 'pillars' which underlie high performance. It almost seems too easy to only consider four pillars, but a closer look reveals that these four pillars can be unpacked into many different aspects which are incorporated. The importance of change management is also highlighted which is crucial when designing an HPO and ensuring sustainability. Light's (2005) work, however, was not sufficiently substantiated by empirical research.

Anonymous (2006) highlighted that Light (2005) has gathered substantial amounts of information about what creates and sustains high performance by using case studies and explained how to improve a company's odds of success. Heinrich (2006) provided a different

view and contended that Light (2005) primarily presented examples from the private sector to illustrate four sources of vulnerability and to discuss how organisations have coped with and addressed them. Light's (2005) focus is quite narrow, and the academic literature on organisational performance that has at length investigated some of the fundamental questions posed, was not cited. The constructive discussion of some of the inherent differences between public and private organisations was also missing from his work, such as goals, constituencies, resource constraints and environments (including the role of politics) and what they imply for managers' efforts to effectively address and overcome organisational vulnerabilities.

2.3.25 High commitment, high performance

Spanning over a period of 40 years, Beer's (2009) professional quest was, and still is, to study and build high commitment, high performance (HCHP) organisations. The aim was to develop a roadmap for organisations to transform into HPOs. Beer (2009) denoted three organisational pillars characterizing high commitment and high performance (HCHP) organisations that deliver sustained performance, these are:

a) *Performance alignment*

   Performance alignment is found when performance goals and strategy fit the structure, systems, people and culture, that is the total organisation system and if the organisation is innovative, the culture, the processes and the employees match the need for innovation. All organisations face strategic inflections: HCHP organisations can rapidly realign with committed employees, while underperforming organisations struggle to do the same without a revolution led by an outside CEO.

b) *Psychological alignment*

   Psychological alignment refers to people's emotional attachment to the organisation's purpose, mission, and values. Few organisations do this well. The secret is to connect

employees emotionally around a higher purpose, something other than quarterly earnings. If organisations can do this, it will produce the commitment needed for ongoing realignment, change and it results in sustained performance. This works because people are willing to put the interests of the customer ahead of their own self-interest. Employees can also be mobilised to change when change is called for.

c) Capacity for learning and change

This refers to organisational learning capability: the ability of the system as a whole to adapt and change itself without resorting to brining in a new CEO. Adaptive organisations can institutionalize mechanisms that enable employee and customers to voice the truth needed to confront reality.

Beer (2009) illustrated that the organisational pillars co-exist:

	High	
PSYCHOLOGICAL ALIGNMENT	**Value-driven high commitment organisation**: Alignment motivated by love of values relationships and norms of reciprocity. People do the right thing but cannot do them right.	**Task- and value-driven high commitment and performance organisation**: Alignment motivated by membership in community of purpose – norms about reciprocity and performance. People do the right thing right.
	Weak fragmented culture and poor performance: Alignment motivated by local sub-unit goals and norms.	**Task-driven high performance organisation**: Alignment motivated by the hierarchy of goals and incentives. People do things right but not the right things.
	Low	**High**
	PERFORMANCE ALIGNMENT	

Figure 2.9. Organisational Pillars (Adapted from Beer, 2009, p. 20)

Beer (2009) uncovered six core barriers that undermine commitment and performance. These include: (a) Unclear strategy, priorities and/or values; (b) A senior team that is ineffective; (c) Leadership characterized by a top-down or laissez-faire approach; (d) Horizontal coordination and communication that is poor; (e) Leadership development that is inadequate and scarcity of down-the-line leaders; and (f) Poor vertical communication.

The inverse of the above therefore characterizes the effective and resilient high commitment, high performance organisation (Beer, 2009, p. 111):

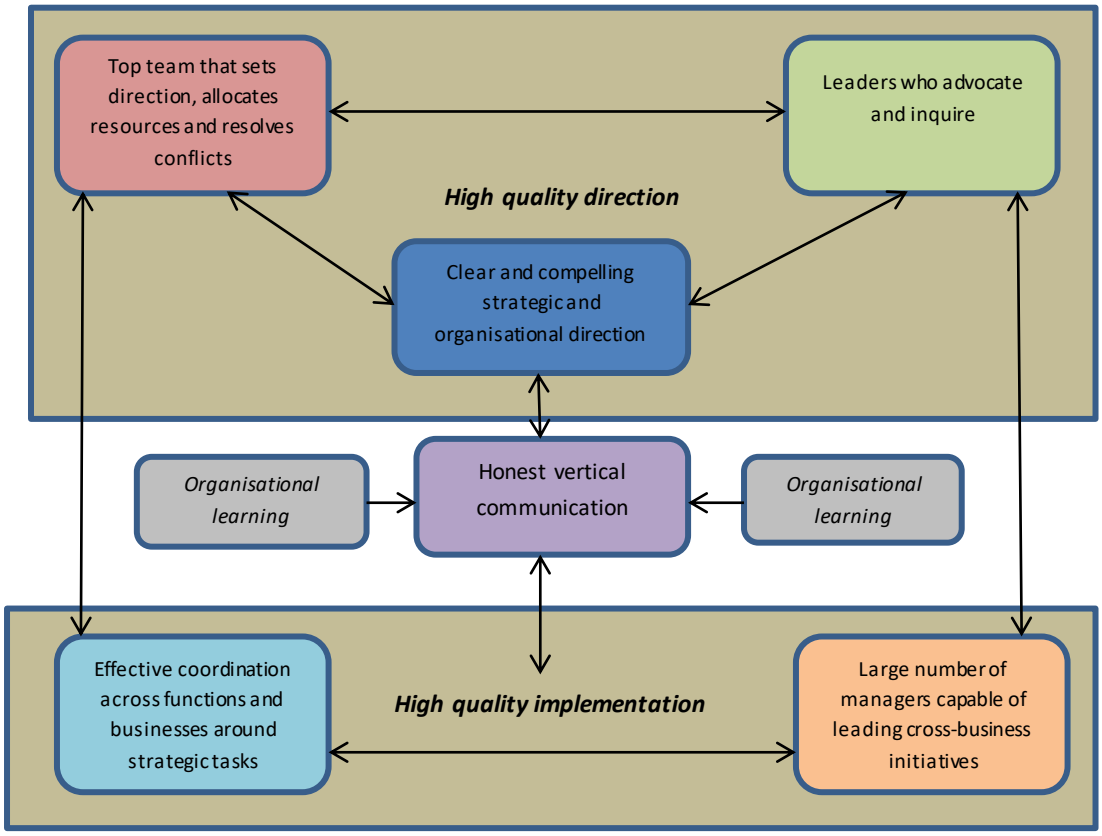


Figure 2.10. High Commitment, High Performance (Adapted from Beer, 2009, p. 81)

Beer (2009) took a systems perspective to organisations and employees and how they exist and work together to create sustained commitment and performance. High commitment, high performance organisations can manage contradictions, paradox and opposing ways of dealing with problems. Beer's (2009) work was substantiated by empirical research. Cohen (2009)

believed that Beer's (2009) work touched on three areas: systems thinking, change management and employee-focused leadership. Putting people before profits is an important aspect of his work and this idea is backed-up with data and real-world examples. Noonan (2011) corroborated this view by stating that Beer (2009) integrated research, theory, and practice to demonstrate exactly what leaders had to do, be, and know. One can see the influence of Drucker (1997) and Collins (2001) in Beer's (2009) writing.

2.3.26 Culture-specific HPO models

Gupta's (2011) research focused on identifying dimensions of organisational culture that are relevant in creating and maintaining a high performance organisation within and across cultures. A large cross-cultural database of the organisational and societal practices and values, was used, amounting to 62 societies and investigated the dimensions of societal and organisational practices and values that support and contribute to the high performance organisation.

In the research, Gupta (2011) referred to various researchers who stated that the basic premise for a high performance organisation is creating an internal environment supportive of customer needs and expectations. In the early twentieth century, the detailed division of labour meant that work was coordinated through the specialization and standardization of jobs. Functional specialists administered it, often in the context of multidivisional systems. Under machine bureaucracy, the culture that emerged was one of distrust, short-term goals, uncertainty, power coalitions and fragmented individual behaviours. Several culture-specific high performance models can be identified, that is (Gupta, 2011, p. 225):

Table 2.5

Culture-specific performance models (Adapted from Gupta, 2011, p. 225)

Model	Core Principle	Core Technique	Core Limitation
Model no. 1: Back to basics – Human Resource Management (future orientation)	Involve workers in enhancing their human capital and to continuously improve processes and machinery (Japanese lean management)	Future-oriented workforce strategies	Organisations tend to speed up work and to undercompensate workforce, in order to capture a share of value accrued form workforce-level initiatives
Model no. 2: Strategic human resource management (SHRM) (future orientation, uncertainty avoidance)	Complement workforce efforts (model no. 1) with technological investments (US business process reengineering)	Uncertainty absorbing infrastructure to allow a fair and productive exchange, allowing organisation to also capture value on workforce-level initiatives	Organisations tend to centralise control over technological investments at the top, hindering workplace democratisation
Model no. 3: Socio-technical partnership (future orientation, uncertainty avoidance)	Integrate the technically oriented SHRM system (model no. 2) with socially oriented networking system (European socio-technical system)	Distributed power structures foster a partnership-oriented networking, for mutual gain sharing and growth	Organisations tend to create exclusive ‘” old boys” networks’, wherein diversity and gender are not included unless mandated by regulation
Model no. 4: Strategic diversity management (future orientation, uncertainty avoidance, power distance, gender egalitarianism)	Foster sensitivity to gender and diversity, bringing entrepreneurial creativity to the socio-technical partnership (model no. 3) (evolving giving voice approach)	Gender egalitarian culture deepens workplace democratisation by enabling everyone to have a voice that matters (beyond majority voice)	Organisations tend to formalise diversity initiatives, that suppress the human-effect in the human resource management
Model no. 5: Culturally sensitive leadership (future orientation, uncertainty avoidance, power distance, gender egalitarianism, human orientation)	Humanise the strategically diverse workplace (model no. 4) by recognising and responding to diverse cultural sensitivities (emerging culturally intelligent approach)	Humane-oriented culture supports a sustainable workplace by promoting responsible voice that is sensitive to each participant’s sensitivities	Organisations may develop a tendency to slow down and be unable to maintain high levels of workforce compensation, if the sensitivities become emotional impediments to the path of development

As can be seen in Table 2.5, Gupta (2011) identified five organisational dimensions (i.e. human resource management, strategic human resource management, socio-technical partnership, strategic diversity management and culturally sensitive), leadership and five societal dimensions (i.e. future orientation, uncertainty avoidance, power distance, gender egalitarianism, human orientation). The aim was to establish empirical evidence for the relevance of the different techniques for high performance organisational behaviour. A

distinction was made between the use of techniques at organisational level, and the use on societal level – if a society provides a supportive culture for using some techniques, then the creation of high performance organisations may require less managerial effort, than otherwise. A distinction was also made between whether these techniques are practiced versus being valued – it is important that high performance organisational behaviour is both practiced and valued, else there may be dissonance that would hinder organisational effectiveness.

Gupta (2011) concluded the following: (a) For the practice of high performance organisation, the societal context plays a hugely important role; (b) Societies with uncertainty absorbing and human oriented practices tend to have more high performing organisations (uncertainty absorbing is associated with complementary technological investments / infrastructure, and humane orientation is associated with cultural intelligence and sensitivities); (c) It appears that, in the societies investing in complementary technological infrastructure and showing cultural sensitivity, it is easier for the organisation to be high performing; (d) For the value of high performance organisation, within-society of organisational level factors play a hugely important role, societal context is less important; (e) Societies that value gender diversity heighten the organisational value for high-performing systems; and (f) The organisations that value gender diversity, future orientation, and uncertainty avoidance, put more value on high performing systems.

Gupta (2011) believed that a multi-faceted (five strategic facets), multi-dimensional (five-cultural techniques), and a multi-level (organisational and societal) approach to the development of high-performing systems will help organisations foster and sustain an open culture, where cultural sensitivities are addressable through a climate of exchange and mutual give and take.

This comprehensive study focuses on the context or culture in which the various organisations operate: the culture of an organisation determines whether it will be a high performance organisation. The author was detailed in the approach as he took societal and organisational factors into account. This proves interesting, as an organisation is a

representative sample of the larger society, that is issues within society (e.g. racism) will most likely be found within organisations as the same people occupy both environments. The author however did not develop a specific model for high performance and implementation thereof. It can also prove to be complicated to implement for a 'layman' manager as there are many factors to be considered. This research was substantiated by empirical research.

2.3.27 The Winning Framework

An Australian researcher, Cocks (2012) referred to research undertaken by Hubbard, Samuel, Cocks, and Heap in 2007, which lead to conceptualisation of the Winning Framework. A thousand (1,000) senior executives were asked to nominate successful organisations against a set of criteria that included taking a balanced scorecard perspective, internal efficiency and long-term growth, financial and market performance, innovation and productivity measures. The final number of organisations was narrowed to 11 and the researchers studied their performance in depth over a period of 25 years, from 1982 to 2007. Annual reports for the 25-year period and other published material were researched to identify key success drivers, interviews with several executives from each organisation to gather additional unique insights into specific causes of success. As a result, nine key elements for long-term success were identified from the 11 organisations:

1. *Effective execution*: Winning organisations do what they say, which implies that they have clear processes that are followed, good control systems, quality management principles, personal responsibility is taken, and performance is rigorously measured.

2. *Perfect alignment*: Winning organisations use measurement and systems as the critical foundations for alignment and they practice a culture of continuous improvement. They endeavour to align culture, leadership, people and perceptions to strategy, as well as alignment to external needs and internal forces.

3. *Adapt rapidly*: Even if perfect alignment is achieved, times change so that it will have to be changed and changed rapidly. Flexibility is a key, but change come with control and innovation is sought in process, products and services.

4. *Clear and fuzzy strategy:* Winning organisations have a clear strategy which can be expressed in many ways and does not necessarily exist through a vision or mission statement, however there is fuzziness at the edges of the strategy.

5. *Leadership, not leaders:* Leadership is about teams of leaders who set up an emotional 'cause' for the organisation – a reason for existence. Leaders adopt a 'captain-coach' style and are players on the field. They are available, egalitarian, supporting their people from close by.

6. *Looking out, looking in:* Winning organisations have an external focus, they are aware of customers but also of their environment, community, international industry, and international trends.

7. *Right people:* Instead of hiring the 'best' people who demand the highest pay, winning organisations hire people who believe in their 'cause' and whose values and attitudes fit.

8. *Manage the downside:* Winning organisations are conservative, despite rapid growth, innovation and looking outwards. They carefully plan beforehand and consider the down- and upside of major decisions. They measure risk.

9. *Balance everything:* Winning organisations do not try to choose between alternatives, they choose both, that is while they are conservative, they are also entrepreneurial, they focus on both the short and long-term, they focus on financials but also on delivering value to customers, employees and the community.

The Winning Wheel Framework shows how these nine elements fit together and are interconnected – all elements are important and change in one element precipitates change to others (Cocks, 2012):

Figure 2.11. The Winning Wheel Framework (Cocks, 2012, p. 19)

Effective execution has a critical role in that it is depicted as both an element of the framework and representative of the outcome of the total framework. Winning organisations are organisations who can effectively execute their strategic plans. These nine elements of success are timeless and highly relevant to the private sector in a wide range of industry sectors including service, non-profit and public sector organisations of all sizes (Cocks, 2012).

A comprehensive study was undertaken with different organisations in Australia. The sample was relatively large, and the research extended over a 25-year period, therefore providing rich data to analyse. Because the research was conducted with Australian organisations, it begs the question whether it can be applied globally. Also, the nine concepts required extensive thought and consideration before implementation can begin. The researchers made use of an

online survey to measure high performance which resulted in obtaining quicker results as opposed to conducting interviews and focus groups which takes longer. Their work was substantiated by empirical research; however, the research was only conducted in Australia and the study did not have a global set-up. The latter could therefore have an impact on its global applicability.

Cocks (2010) contended that this research found that being a winning organisation in Australia has little to do with charismatic leadership seeking great breakthrough ideas, rolling out precise mission statements or creating the perfect organisational structure. Rather, they identified a winning framework that identified effective execution of plans and strategies as the pivotal element. There is a need to balance strategy formulation with strategy execution with emphasis on focused leadership, visible management systems and use of project management tools and techniques.

2.3.28 High Performance Characteristics

Akdemir, Erdem, and Polat (2010) conducted a study to determine if high performance organisations require specific characteristics. Their research mirrored a literature study ranging from 1988 to 2005 in which they identified a wide range of characteristics and discussed their importance and relation to high performance. They list the most widely accepted characteristics of a high performance organisation according to Akedemir et al. (2010) are as follows: (a) Well-understood vision and values; (b) Flexibility and the proper use of discipline; (c) Setting clear and specific goals; (d) Strong communication; (e) Trust and confidence; (f) Fun; (g) Decision making at the lowest level; (h) Effective training; (i) Performance feedback; (j) A stronger, more consistent customer focus and total quality; (k) Multiple methods of measuring improvement; (l) Strategic change management; (m) Encouragement of innovation and openness to technology; (n) Team based work; (o) Participative leadership; (p) Effective incentive system; (q) Recruiting and hiring the best talent; (r) Work-life balance; (s) Workplace diversity; (t) Motivation; (u) Compensation and Performance appraisal; (v) Knowledge Management; (w) Meaningful and purposeful work;

(x) Effective succession planning; (y) Effective planning and analysis; and (z) Ethical decision making and peer respect.

The researchers concluded that, when organisations have these traits, they will have the correct context in which to make decisions to move forward. They do, however, warn that the effort to become a high performance organisation is never-ending, and it is full of pitfalls and problems. They concluded that any organisation comprising at least some of these requirements may be successful in the business environment (Akdemir et al., 2010).

The authors identified several aspects that contribute to a high performing organisation. Although many of the aspects are relevant and do play an important role in high performance, the list reads like checklist for a high performance organisation, similar to a job profile for Superman. To someone looking to build a high performance organisation, the list might appear overwhelming and unattainable, since there are too many aspects to address and control. Their work was not sufficiently substantiated by empirical analyses.

2.3.29 The Beehive

Nel and Beudeker (2009) designed a framework they referred to as ‘The Beehive of Sustainable Competitiveness and High Performance Culture’. Leaders can use the framework to position their organisations to better meet challenges. The Beehive was developed from a body of research conducted in 1998. Over a period of two years representatives from more than 300 organisations across all sectors representing more than 400,000 employees participated in the research. The research went through six broad phases: (a) A survey of international publications was used to identify the range of best operating practices that drove sustainable competitiveness; (b) Focus groups consisting of representatives from more than 70 organisations used the international data and evidence to define the relevance for South African organisation; (c) Based on this, the Beehive framework was developed; (d) In an initial survey, representatives (cross section of supervisory, middle management and senior management levels) of more than 300 organisations across private and public sectors assessed

their organisational status; (e) Two years later a further 259 then currently-employed MBAs assessed the status of their organisations which provided further information about the perceptions of people at middle to senior management levels representing small, medium, and large organisations; and (f) Since then several dozen organisations have used the Beehive to assess the status of their organisations' cultures and the extent to which they were developing as an HPO.

The Beehive framework can be illustrated as follows:

Figure 2.12. The Beehive Framework (Adapted from Nel & Beudeker, 2009, p. 43)

The authors were detailed in their approach to HPOs. They developed a framework depicting fundamentals in organisational development, working from the strategy down to

operationalisation, that can easily be utilised by leaders in any organisation. Their approach was developed from personal experience over decades of practical experience and research. The framework is incredibly detailed and can perhaps be simplified to depict a simple, yet comprehensive, HPO model. Their work was sufficiently substantiated by empirical analyses.

2.3.30 High Performance in the Public Sector

Achieving and maintaining high performance status proves to be a difficult, especially in the public sector. De Waal (2010a) suggested that public sector organisations worldwide hold a great deal of room for improvement and that these organisations score lower on HPO factors as opposed to excellent (predominantly private sector) organisations do. Therefore, the public sector may benefit from improving scores on the following HPO factors (De Waal, 2010a): (a) Identifying the profile of an excellent public sector manager; (b) Strengthening the resoluteness of management; (c) Excelling in the core competence of public sector organisation (i.e. client dedication); (d) Improving the performance management of the organisation; (e) Improving process management within the organisation; and (f) Increasing the quality of the workforce.

In this study, De Waal (2010a) looked at HPOs from a different angle, that is one of management. The belief was that high performance started with the public sector manager and is cascaded down to the workforce level. The study demonstrated the value that good leadership plays in reaching high performance. The work was substantiated by empirical analyses. For more on the South African Public Sector refer to Chapter 3.

2.3.31 What makes a High Performance Organisation?

De Waal (2012) conducted research into what makes an HPO, over a period of five years, studying organisations throughout the world, representing nearly every continent. 290 studies were covered in the literature review and the study consisted of two phases. In Phase 1, 53 potential HPO characteristics where identified and in Phase 2 these characteristics were

included in a questionnaire presented to managers and employees working within profit, non-profit and governmental organisations from 50 countries. Statistical analysis revealed 35 characteristics which could be categorised into five HPO factors. Subsequently, De Waal (2012) created the following HPO Framework that includes five factors of high performance:

Figure 2.13. HPO Framework (Adapted from De Waal, 2012, p. 23)

The five most distinctive characteristics were determined for enabling an organisation to be decisive and to excel in the long term (De Waal, 2012):

1. *High-quality management* - Managers of excellent organisations are honest, decisive, action-oriented, performance-oriented, effective, self-confident and have a strong leadership style. The emphasis lies on a strong relationship of trust with employees and on coaching and facilitating. Employees and managers hold each other responsible and the managers are decisive with it comes to 'non-performers'.

2. *High-quality employees* - Employees assume responsibility and want to be held responsible, the total staff is diverse and complementary, employees are trained at increasing flexibility and resilience and want to be challenged to excel.

3. *Long-term orientation* - Continuity in the long term always comes before short-term profit, orientation towards collaboration with other organisations, orientation towards good long-term relationships with all stakeholders, orientation towards customer interest; managers are committed in the long term to the organisation and therefore often promoted from within.

4. *Continuous improvement and innovation* - The organisation have a distinctive strategy, processes are continuously improved, simplified and coordinated, the more relevant and correct information is reported, and the core competencies and products are continuously updated and improved.

5. *Open and action-oriented* - Management communicates often with employees, there is considerable focus on communication and knowledge sharing, the organisation is open to change and performance-oriented.

Table 2.6 lists the 35 HPO characteristics that underlie the HPO factors, in order of importance within a factor:

Table 2.6

35 HPO characteristics underlying the five HPO factors (De Waal, 2012, p. 27)

HPO Factor 1: Management Quality
1. Management is trusted by organisational members.
2. Management has integrity.
3. Management is a role model for organisational members.
4. Management applies fast decision making.
5. Management applies fast action tracking.
6. Management coaches organisational members to achieve better results.
7. Management focuses on achieving results.
8. Management is very effective.
9. Management applies strong leadership.
10. Management is confident.
11. Management always holds organisational members responsible for their results.
12. Management is decisive with regard to non-performers.
HPO Factor 2: Openness & Action Orientation
13. Management frequently engages in dialogue with employees.

14. Organisational members spend much time on dialogue, knowledge exchange and learning.
15. Organisational members are always involved in important processes.
16. Management allows making mistakes.
17. Management welcomes change.
18. The organisation is performance driven.
HPO Factor 3: Long-term Orientation
19. The organisation maintains good and long-term relationships with all stakeholders.
20. The organisation is aimed at servicing the customers as best as possible.
21. Management has been with the company for a long time.
22. New management is promoted from within the organisation.
23. The organisation is a secure workplace for organisational members.
HPO Factor 4: Continuous Improvement & Renewal
24. The organisation has adopted a strategy that sets it clearly apart from other organisations.
25. In the organisation process are continuously improved.
26. In the organisation process are continuously simplified.
27. In the organisation process are continuously aligned.
28. In the organisation everything that matters to performance is explicitly reported.
29. In the organisation relevant financial and non-financial information is reported to all organisational members.
30. The organisation continuously innovates its core competencies.
31. The organisation continuously innovates its products, processes and services.
HPO Factor 5: Employee Quality
32. Management inspires organisational members to accomplish extraordinary results.
33. The resilience and flexibility of organisational members is continuously strengthened.
34. The organisation has a diverse and complementary workforce.
35. The organisation grows through partnerships with suppliers and/or customers.

De Waal's (2012) research was the most comprehensive literature study of its kind ever conducted; it encompasses 290 publications over the period 1960-2007. A broad set of studies from the professional literature and from many different scientific disciplines were included. Various elements were incorporated including elements about organisational structure, human, emotional, strategic, material, resources, HRM, and the like. De Waal (2012) referred to these HPO factors as 'evergreens of management' as they will remain important through time for creating and maintaining an excellent organisation. Managers would always have to pay attention to these factors when they devise actions to lead their organisations to excellence and superior results. De Waal (2012) advised that the framework as not a blueprint, but rather, it should be adapted to suit the organisational situation.

For a detailed discussion and critique of De Waal's (2012) HPO framework, refer to Chapter 3, sections 3.6.1 and 3.6.2.

Kahn (2013) believed De Waal's (2012) study provided an interesting perspective and unique insights into the ways in which contemporary organisational leadership has assisted organisations to achieve an extraordinary level of success. De Waal (2012) included profit, non-profit and governmental organisations from around the world in his study. Hatting (2018) conducted research using De Waal's (2012) HPO framework with the aim of assessing high performance. He concluded that this framework provided a theoretically and empirically robust instrument for research and enables managers to identify areas of weakness in their organisations. Furthermore, it provides enough detailed information to enable them to engage with the issue of what remedial action is appropriate and desirable.

2.4 SUSTAINING HIGH PERFORMANCE STATUS

Obtaining high performance is important, however sustaining it is more challenging. The following section discusses how to sustain high performance once it has been achieved.

2.4.1 Learnable Organisational Competence

Owen, Mundy, Guild, and Guild (2001) contended that *a learnable organisational competence* is the one ability that sustains the delivery of quality products and services which are essential to its long-term success. They identified three major deterrents to sustaining high performance: (a) Senior leadership of an organisation has an inaccurate understanding of the marketplace in which the organisation must compete – this inevitably leads to vision, mission, and strategy that are inappropriate; (b) Behaviours required to successfully implement the business strategy are out of alignment with customer and marketplace requirements, that is unilateral control of decision making; and (c) Organisational systems and process often fail to support the vision and mission of the organisation; therefore, organisations focus on, and measure, the wrong things.

Based on these findings Owen et al. (2001) conceptualised their understanding of the keys to creating sustainable high performance:

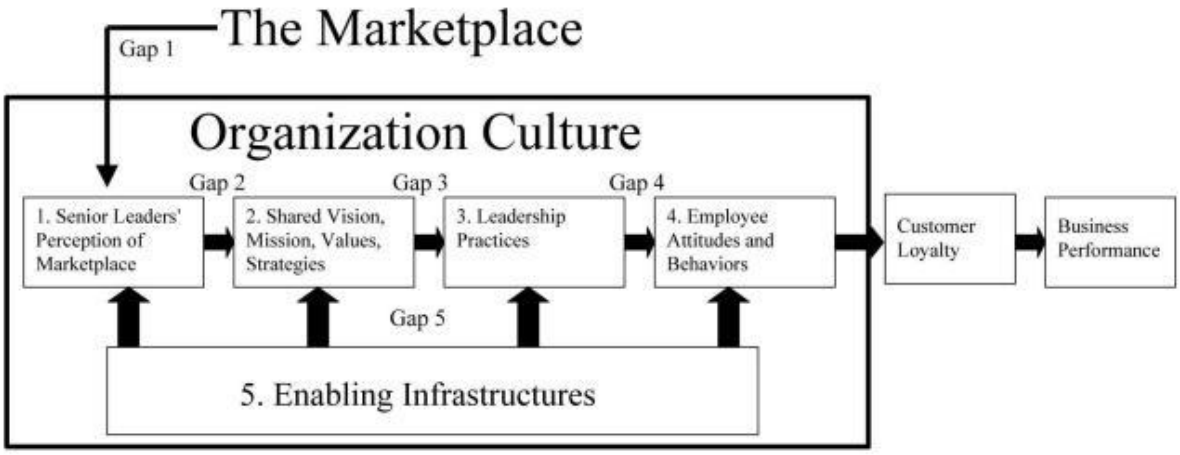


Figure 2.14. Keys to creating sustainable high performance (Owen et al., 2001, p. 12)

According to Owen et al. (2001) a sustainable HPO can: (a) Remain responsive to marketplace expectations; and (b) Sustain the behaviours required to meet marketplace expectations. These authors maintained that success is determined by bringing about the alignment of five core elements, as illustrated in the model shown in Figure 2.14 (Owen et al., 2001): (a) Senior leaders' perception of the marketplace; (b) A shared vision, mission, values, and strategies; (c) Leadership practices that are congruent with the vision, mission, values, and strategies; (d) Infrastructures which support and reinforce the vision, mission, values, and strategies; and (e) Employee behaviours that meet customer needs.

The authors took a step back and identified what hinders an organisation from reaching high performance, that is *what does not work*, and then went step further to identify what does work and what sustains high performance. In this endeavour, they looked at people (leadership and behaviours), infrastructures (physical and systems and processes) as well as strategy. They therefore covered the larger organisational picture and elements thereof. The authors neglected to discuss the studies in detail, that is how the data was collected and how the data was statistically analysed. They did, however, provided a detailed explanation of

how the model worked as well as practical steps to improve organisational performance. Mohamad, Bakar, Halim, and Ismail (2014) supported this view in their findings - apart from financial performance, corporate communication management (CCM) - also contributed toward non-financial explanatory variables, especially mission achievement.

2.4.2 Culture building

According to Holbeche (2005) culture building is fundamental in creating sustainable high performance. In line with this thinking, the author identified the following factors high performance organisations do:

1. High performance organisations focus on the ‘right things’.

2. High performance organisations reconcile different, potentially conflicting stakeholder needs:
    a. High performance organisations have customer-focused purpose.
    b. High performance organisations value employees.

3. High performance organisations aim for sustainable success over the long term.
    a. High performance organisations grow leadership.

Taking the above into account, Holbeche (2005) proposed the following high performance model:

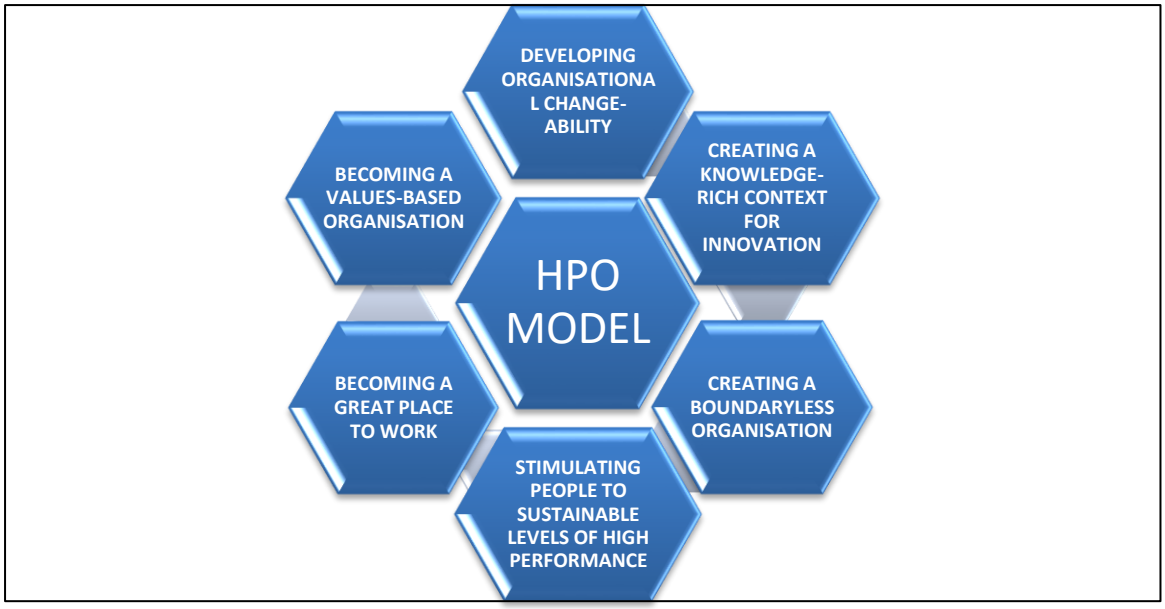


Figure 2.15. Culture building HPO model (Adapted from Holbeche, 2005, p. 15)

Underpinning features of the model are (Holbeche, 2005): (a) Appropriate management and leadership; (b) Built-in flexibility; (c) A fair employee 'deal'; and (d) Empowerment and accountability.

Each concept in the HPO model can be described as follows (Holbeche, 2005):

a) *Developing organisational change-ability* - This describes handling change in a way that stimulates employee ownership and commitment while, at the same time, achieving improved results. It also builds flexibility into planning, systems, processes, structures and mind-sets.

b) *Creating a knowledge-rich context for innovation* - This concept attempts to develop working practices and management approaches which are conducive for both breakthrough ideas and for continuous improvement. It also aims to maximise the potential value of shared knowledge and, at the same time, manage for diversity.

c) *Creating a boundaryless organisation* - This is about operating effectively across mind-set, functional, corporate and geographic boundaries. It also suggests how to use

technology and teamwork to establish a greater ‘reach’ as well as flexibility for employees and the organisation as a whole, while potential synergies are maximized.

d) *Stimulating people to sustainable levels of high performance* - Building roles that make the most of talents and accountabilities of employees, as well as managing performance in a way that unleashes employee potential, as opposed to constraining it. This concept looks at building empowerment and accountability.

e) *Becoming a great place to work* - This is about developing a ‘new deal’ which speaks to an employee’s needs for work-life balance, development and career growth. It also explores how organisations can partner with the employee to bring the deal to realization.

f) *Becoming a values-based organisation* - Conceptualizing characteristics of an organisation to which key employees want to commit and what this means for management and leadership on a practical level. Finally, it explores going beyond the rhetoric of values statements and corporate responsibility policies (i.e. how to ‘walk the talk’ and how to build trust using a new basis).

Holbeche’s (2005) model for high performance is comprehensive and detailed as it considers a variety of aspects pertaining to high performance. Belt (2008) believed that the book did not provide a diagnosis model or impetus to implement improvement activities. Instead, the book described the numerous factors that can contribute to excellent performance but did not provide insight into the degree to which these factors can be decisive in achieving this. The findings were not tested in a relevant control group and the interrelationship between the factors and their degree of applicability within different types of organisations is only examined to a limited extent.

2.4.3 Knowledge management as part of creating and sustaining high performance

Research conducted in Uganda in the banking sector (Bagorogoza & De Waal, 2010), investigated the relationships between knowledge management (KM) and objective and perceived organisational high performance. The researchers developed an evaluation model

that examined KM in terms of knowledge acquisition, knowledge dissemination and responsiveness to knowledge, as part of a greater HPO framework. In combining KM and the HPO framework, the researchers' expected firstly to create a culture that promoted and encouraged KM to flourish in the banking sector, and secondly that this would lead to increased competitiveness and sustainable high performance (Bagorogoza & De Waal, 2010).

Knowledge was the leading instrument for organisations to achieve competitiveness and perform better than competitors, an organisation must therefore effectively manage knowledge in order to attain and sustain high performance. Customer demands can only be met when employees are knowledgeable about the organisation's services and operations. When employees are willing to disseminate and respond to knowledge and have adequate capabilities to do this, and at the same time, managers foster good KM behaviour which can then be applied for the benefit of the organisation – this causes a continuous flow of knowledge throughout the organisation. Organisations which have introduced knowledge management as part of their strategies have reported business process efficiency improvements, better-organised communities, and higher staff motivation (Bagorogoza & De Waal, 2010).

Bagorogoza and De Waal (2010) suggested a link between KM and high performance as HPOs have similar traits as KM, that is HPOs find it essential to adopt a flatter and less hierarchical organisation structure, are willing to adopt new work practices and put emphasis on empowerment, teamwork, learning, and employee participation. When HPOs then need to adapt to a changing business environment and to improvements in performance and quality of life, these traits lead to an ability to do so – they result in making offering better services possible and in providing more effective and efficient internal processes. The researchers therefore suggested that this HPO framework mediated the relationship between KM and high performance (Bagorogoza & De Waal, 2010).

Knowledge management can be defined as (Bagorogoza & De Waal, 2010, p. 310):

A systematic, organised, explicit, and deliberate ongoing process of creating, disseminating, applying, renewing and updating the knowledge for achieving organisational objectives.

Furthermore, the researchers (Bagorogoza & De Waal, 2010) identified three dimensions of KM, namely: knowledge acquisition, knowledge dissemination, and responsiveness to knowledge. Within the HPO framework, competitive advantage (CA) is an indispensable factor in achieving high performance. Therefore, the level of CA has an important impact on high performance and is related to KM.

Figure 2.16 illustrates the theoretical research model (Bagorogoza & De Waal, 2010):

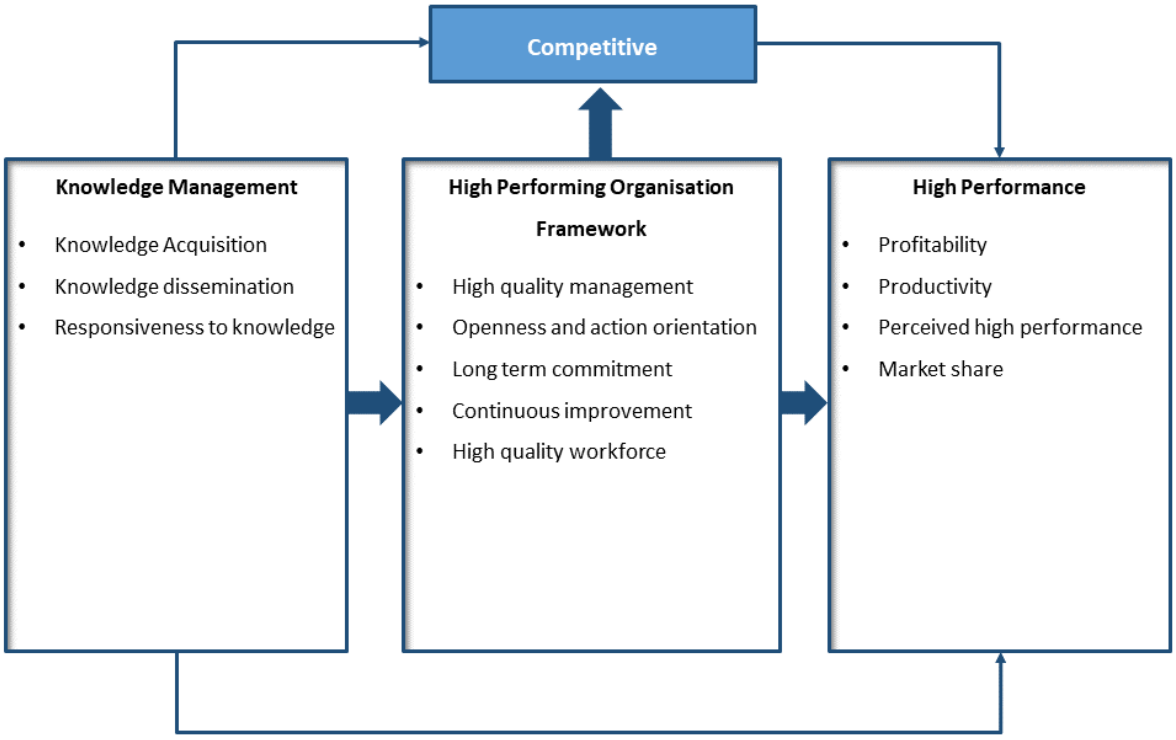


Figure 2.16. The theoretical research model (Bagorogoza & De Waal, 2010, p. 312*)*

Figure 2.16 illustrates the journey of researchers (Bagorogoza & De Waal, 2010) in determining the following: (a) KM is positively associated with (objective and perceived)

organisational high performance; (b) The HPO framework mediates the relationship between KM and (objective and perceived) high performance; (c) KM is positively related to the HPO framework; (d) CA moderates the relationship between KM and HPO framework – more specifically, a high quality workforce decreases the strength of positive relationship between KM and HPO framework; (e) The HPO framework has a positive impact on (objective and perceived) organisational high performance; and (f) CA moderates the relationship between the HPO framework and (objective and perceived) organisational high performance.

The researchers (Bagorogoza & De Waal, 2010) found that KM has no influence on high performance, and it was positively related to competitive advantage. The HPO framework was a perfect mediator between KM and high performance. Furthermore, knowledge acquisition has the greatest positive influence on the HPO framework. They found that CA moderates the relationship between KM, the HPO framework, and high performance. The HPO framework has a positive impact on (objective and perceived) organisational high performance. And finally, CA moderates the relationship between the HPO framework and (objective and perceived) organisational high performance.

The implication of the research findings (Bagorogoza & De Waal, 2010) is that KM is not directly related to high performance, but it could have and influence if mediates and moderated by the HPO framework and competitive advantage respectively. KM therefore affects high performance when the HPO framework is in place. In other words, KM could successfully increase high performance beyond that of its competitors, when a good HPO framework is in place. This means that, when supported by the HPO framework, KM (acquisition) will be more meaningful to employees. High performance focuses on financial or market share, process, and management. Therefore, for sustainability of high performance, organisations should implement the HPO framework: the organisation is a system, with knowledge as the input, the HPO framework as its processing and high performance as its output. An organisation can achieve sustained competitive advantage and high performance by managing the knowledge it acquires, disseminates and by how it responds to knowledge (Bagorogoza & De Waal, 2010).

The researchers used a relatively small sample based in Uganda and only focused on financial institutions. Therefore, generalisability of the study is limited. Their work was substantiated by statistical analyses. Other variables could also affect high performance and promote KM, for example, organisational culture and organisational learning (Bagorogoza & De Waal, 2010).

2.4.4 The possibility of paradox

In conducting research, Wolf (2015) aimed to determine how performance is sustained and instead unveiled a collection of core organisational paradoxes. Research findings suggested that sustained performance is not a permanent state an organisation achieves, but it is rather through perpetual movement and dynamic balance that sustainability occurs. Sustaining movement was suggested, which is predicated on the ability of organisational members to move beyond the experience of paradox as an impediment to progress.

Although there appears to be a greater recognition of the importance of paradox in understanding the complexity of organisational performance (Marsh & Macalpine, 1999; Pascale, 1990; Peters & Waterman, 1982), many challenges and stigma is carried by paradox as a concept unto itself in current management thinking. Contemporary theory construction's focus is still biased toward the side of permanence, order, and stability (Poole & Van de Ven, 1989) while little has been addressed in looking at the tensions or oppositions (paradoxes) in organisations. Investigations of complicated organisational phenomena are mostly focused on achieving equilibrium (Quinn & Cameron, 1988), either ignoring contradictions or one extreme is identified as good and the other bad to resolve the issue. It therefore seems as though the idea of paradox creates a general discomfort (Wolf, 2015). Many authors acknowledged that paradox exist, however they continue to suggest paradox can be 'managed' (Morgan, 1997; Peters & Waterman, 1982) or 'addressed' (Van de Ven & Poole, 1988). Paradox have become increasingly prevalent in organisational studies (Lewis, 2000; Poole & Van de Ven, 1989; Quinn, 1988; Quinn & Cameron, 1988) and has presented itself an effective tool to utilise when exploring what is happening in organisations (Luscher, Lewis, & Ingram, 2006).

When paradox is recognised, the complexity and ambiguity of organisational life can be more effectively explored (Cameron & Quinn, 1988). Wolf (2015) therefore deduced that paradox presents a powerful means to reveal the dynamic factors involved in an organisation when exploring a model for sustaining high performance. The development of broader, more interesting theoretical concepts can be stimulated when looking for organisational tensions or oppositions (Bartunek, Rynes, & Ireland, 2006; Davis, 1971). Understanding paradox does not necessarily solve all problems but rather it creates the potential for new possibilities (Luscher et al., 2006). Wolf (2015) therefore concluded that we should use paradox to generate insight and change, instead of attempting to reduce the tension of paradox or rationalise its existence. Lewis (2000) believed the linear models under which we tend to frame organisational action do a great disservice to the complex organisations of today. It is in the idea of transcending paradox, not simply managing it, that a new way to experience and exist with paradox as a regular element of organisational life can be explored (Pascale, 1990; Lewis, 2000).

2.4.5 Movement as a means for sustaining high performance

Wolf's (2015) study was based on the longitudinal examination (over a seven-year period) of performance for a set of 12 hospitals across the United States. Respondents in the study shared hundreds of stories which lead to the research team identifying themes which lead to the design of three movements and nine key actions for sustaining high performance.

Three critical 'movements' have to be held, not as paradoxical, but as active polarities, then an organisation can transcend paradox and take active steps to continuous achievement in outperforming their peers. Each movement is comprised of three actions that represent what the sustaining high performers in the study revealed as critical to their ability to achieve ongoing performance. However, these are not simply a checklist for HPO, they are actions that need to be taken on relentlessly day after day. To sustain performance is a never-ending journey that requires great stamina, resolve, and a commitment to these fundamental actions (Wolf, 2015):

Table 2.7

Three movements and nine key actions for sustaining high performance (Wolf, 2015, p. 86)

Movement	Key Actions
Agile / Consistency	Acting with clarity of purpose Going above and beyond Challenging the status quo
Informative / Inquiry	Caring about our people Seeking input and sharing information Walking the talk
Collective individualism	Committing to who Connecting and caring Acting with ownership and autonomy

According to Wolf (2015), *agile / consistency*, the first movement, represents the culture or consciousness of the organisation. There is a focus on purpose and a balanced commitment to progress that provides people the ability to move towards moments of anxiety, but without fear. The capacity to engage in organisation efforts and participate in guiding organisational outcomes is represented by the movement, not as contradictory to purpose, but rather as contributing to cause.

The first of three key actions under *agile / consistency* is *acting with clarity of purpose*. There is a strong sense of the collective self and organisational pride supported by a sense of personal connection to the organisation and potential contributions of people. The second key action, *going above and beyond*, represents the ability of individuals to do what it takes to create peak experiences for customers and for one another. The third key action is challenging the status quo. An environment that supports people's efforts to try new things reinforces the ability to challenge the status quo. Most importantly, this ability allows people to make mistakes that are not career-ending but to make discoveries (positive or negative) which are seen as organisational gifts. This represents the very idea of the movement, it is far better to fail at trying than not to do at all (Wolf, 2015).

Wolf (2015) described the second movement, *informative / inquiry*, as representative of the important influence of leadership in sustaining organisational performance. The critical role of leadership is focused on in terms of sustaining high performance and does not simply refer to traits or styles such as transformational or visionary, but rather it is the constancy of actions from all levels of leadership in the organisation.

The first key action that Wolf (2015) mentioned is *caring about people*. It focuses on sincere interest in and respect for people across the organisation and carries weight in encouraging the engagement of people in supporting performance. The second key action, *seeking input and sharing information*, is more than delivering communication. The consistent effort to reach out to people in the organisation for their ideas, concerns and contributions, is represented here. Most critical is the informal communication process used by leadership to personally connect with people, while gathering a broad collection of information from people across the organisation. *Walking the talk*, is the third key action and may be the core of effective leadership in sustaining high performance. The impact of leaders doing what they say, of living their words through their actions, captures the very essence of sustaining high performance. In walking the talk commitment is realized and respect is delivered, commitment to and respect for leadership is earned (Wolf, 2015).

The third movement, *collective / individualism*, represents the powerful element of people in organisations, according to Wolf (2015). The polarities of ensuring that the right people are part of your organisation is represented here: people who are aligned with, understand, and are committed to the organisation's purpose and direction, people who can serve as strong individual contributors, but who also recognize that in spite of individual strength, the most effective contribution is using their individual strengths in powerfully collaborating across individual and organisational boundaries. The systemic perspective of organisations comes through here, because while an organisation represents a collection of individuals, it is the organisation that provides a framework for accomplishment. Collaboration does not diminish individual contribution but rather expands organisational capability (Wolf, 2015).

Committing to who, is the first key action, and is grounded in the idea of getting the right people on board but not only the attraction and acquisition of talent. The next level of our commitment is developmental opportunities. The next key action is *connecting and caring*, which is about providing the opportunity for people in the organisation to connect with one another, weave a network that is supportive even in the face of critical demands. This ensures that someone's basic needs are met, not as mandatory management action, but rather from a groundswell of collegial support. The support for and encouragement of personal connection has a profound effect on the sustaining of performance (Wolf, 2015).

Acting with ownership and autonomy is the last of the key actions, which represents the freedom and ability of members of the organisation to make significant decisions at the point of contact. People who do not feel they are at risk for doing the wrong thing can freely engage in these actions as they are given the opportunity continuously to do what is right. Granted, decision hierarchies may be necessary for significant expenditures or fundamental strategy shifts but providing space and opportunity for people to make contributions through their daily interactions and individual decisions without the fear of retribution or punishment seems to play a significant role in supporting the third movement (Wolf, 2015).

In conclusion, Wolf's (2015) data ultimately suggested that it is the connected nature of these movements and key actions that has allowed the organisations involved in his study to face paradox and distinguish them as sustaining high performers. The work was substantiated by empirical analyses. The concept of paradox is an interesting one as it proves (once again) that ambiguity is difficult to grasp and many researchers endeavour to explain this phenomenon. This study shows that it is not a matter of explaining or rationalising paradox but rather to transcend it and balancing it in an otherwise unbalanced system.

2.4.6 Risk management as a means for sustaining high performance

Iraci (2018) contented that the global marketplace is becoming increasingly competitive and shareholder expectations are higher than ever, therefore the need for top talent and a high

performance culture becomes more important for organisations – risk management thus plays a key role in building and sustaining high performance. Risk must be managed around the following areas (Iraci, 2018):

a) Vision, execution, and communication

A vision and strategy need to be communicated by leaders for all people to rally around, even if it is aspirational – people need to feel part of something larger than themselves. Together with a vision, there must be a robust planning process to ensure successful execution. Many leaders fail mainly because of bad execution.

b) Intellectual capital

The single greatest asset for gaining and sustaining competitive advantage is human capital. An environment in which clever people can thrive and produce wealth for all stakeholders creates competitive advantage. People and intellectual capital matter more than ever before as we now exist in a knowledge-based economy. Intellectual capital should be fostered, therefore successful organisations must evaluate their recruitment, retention, and promotion strategies to ensure that the best-qualified candidates are developed.

Tim Hockey, president, and CEO of TD Ameritrade, said recently (Iraci, 2018, p. 2):

> *Sustaining high-performance requires leaders to embed performance expectations as part of firm culture and push decision making down to the level of management responsible for the outcome. Associates of all levels of seniority must be encouraged to take ownership of issues, use good judgment when making decisions, [and] show initiative and managerial courage. A firm's greatness will depend on the capabilities*

of its people, so leaders need to ensure the right people are in the right roles and that they have the tools and training needed to execute on firm strategy.

There are three types of achievers in an organisation, namely: overachievers, average achievers, and low-performing associates (Iraci, 2018):

- The best source for identifying new ways of conducting business is *overachievers*. However, they must be managed correctly otherwise they become disengaged and potentially become distractions often leading to turnover. Their energy must be harnessed correctly and channelled productively. Organisations must identify them early on and understand what makes them 'tick'. Overachievers typically make up 20% of an organisation, responsible for generating 80% of the organisation's profits.
- Average achievers make up approximately 50%-80% of the workforce and need to be managed to ensure their performance is aimed in the right direction. They also need to be recognised for their performance. If leaders can maximise and ensure their overachievers are productive, additional value can be derived if average achievers are influenced by overachievers and the organisation's performance increases.
- Lastly, the low-performing associates who should stay at an appropriate performance level and do not harm organisational performance. There should be plan for low-performing associates or they will influence the average achievers thus pulling performance down.

c) Criticality of roles

Critical roles within organisations comprise of those roles that have a significant impact on key performance measures such as revenue, costs, losses, and customer satisfaction. When these roles are identified, resources can be better allocated to these positions. A

workforce segmentation model that works effectively comprises of the identification of *skills value* and *skills uniqueness*. Valuable skills that could impact costs, revenue or overall organisational efficiency, consist of up to nine key value drivers, that is (Iraci, 2018): revenue or sales, stakeholder relations, cost and efficiency, quality, innovation, organisational capability, reputation or risk management, financial and process or systems. One or more of these value drivers can exist in the roles, and their impact on the organisation will vary.

Unique skills are normally organisation-specific, difficult to find in the open market, hard to replace, and competitors find it difficult to imitate or duplicate these skills. Four possible employment roles are created using both skills value and skills uniqueness, which fall into four quadrants, that is (Iraci, 2018): (a) Critical: High skills value and high skills uniqueness; (b) Professionals (skilled or semi-skilled): High skills value and low skills uniqueness; (c) Doers: Low skills value and low skills uniqueness; and (d) Specialists: Low skills value and high skills uniqueness. To have a framework which supports the classification of roles by criticality may assist in building and sustaining high performance in an organisation.

d) The three-lines-of-defence model

The three-lines-of-defence model ensures proper distribution of roles to promote risk ownership and a strong risk management culture. It can also assist in eliminating inefficiencies and gaps that could occur between the various risk, compliance, and staff functions. Iraci (2018) identified three lines of defence:

- *First line of defence* - Generally, consists of a business manager who are responsible for ownership of risks (e.g. market risk or credit risk).
- *Second line of defence* - Specialists who are subject-matter experts in specific areas (e.g. compliance, finance, human resources, etc.). These functions assist the first line of defence by establishing and communicating frameworks and methodologies and/or set standards and policies to manage risk.

- *Third line of defence* - Both internal and external audit make up this line.

This model promotes a positive risk culture and when combined with measuring criticality, it creates a holistic organisational design that promotes risk awareness and a high performance culture that allocates resources efficiently (Iraci, 2018).

e) Reduce bureaucracy

Having staff functions ensures that sound business practices are implemented, which leads to organisational growth. As organisations expand, the growth of staff functions ensures that the organisation's growth is sustainable and conducted in a safe and sound way. When these staff functions become too large, bureaucracy sets in which leads to reduced flexibility and overcomplicated rules. In order therefore to sustain a high performing culture, organisations need to ensure that staff functions do not grow to the point of becoming overly bureaucratic because this will stifle innovation and hamper the organisation's ability to react quickly to market changes.

f) Effective rewards and recognition

A rewards and recognition programme which consists of compensation, benefits, and recognition and is seen as fair and worth the extra effort, can influence behaviour and provide motivation to staff. An effective rewards and recognition program is an integral part of sustaining a high performance culture.

In conclusion, in building and sustaining a high performing corporate culture, risk management is key. It is also important to have vision to motivate the associate base and it is critical to execute and have the right people in the right roles. Roles should be graded by criticality to ensure that resources are adequately allocated in roles that provide the highest stakeholder value. Ideally, a high performing culture should lead to the organisation being

more efficient and effective and requires commitment from management (Iraci, 2018). There is however no evidence that his work was sufficiently substantiated by empirical analyses.

2.4.7 So what ultimately sustains high performance?

Communalities between researchers suggested that *having a shared visions, mission, values and strategies* (Owen et al., 2001; Holbeche, 2005; Iraci, 2018) play a role in sustaining high performance. Bagorogoza and De Waal (2010) found that that *knowledge management (KM)* affects high performance when the HPO framework is in place. Wolf's (2015) second movement is *informative / inquiry* with its key actions being: Caring about our people, *seeking input, and sharing information and walking the talk*, which supports what Bagorogoza and De Waal (2010) highlighted. Wolf (2015) and Holbeche (2005) highlight *agility/flexibility* as playing a crucial role. Holbeche (2005) referred to creating a boundary-less organisation and developing organisational change-ability but building flexibility into planning, systems, processes, structures, and mind-sets. Wolf (2015) referred to agility and acting with clarity of purpose, going above and beyond, and challenging the status quo – all of which requires flexibility and out-of-the-box thinking. The capacity to engage in organisation efforts and participate in guiding organisational outcomes is represented by the movement, not as contradictory to purpose, but rather as contributing to cause (Wolf, 2015).

The researcher therefore concluded that many factors affect whether high performance is sustained; for different organisations, this means different things. The researcher believes that if leadership has identified and implemented a validated HPO framework or model and is consistently driving implementation, year after year, high performance will be sustained. It also takes commitment and from all role-players to achieve and sustain high performance.

2.5 CHAPTER SUMMARY

This chapter provided a literature review of high performance organisations by tracking high performance through the ages, describing, and exploring numerous high performance definitions. A better way of working was introduced through evaluations of the various HPO

frameworks and models that can be found in the literature. Finally, how to sustain high performance status was discussed. Ultimately, an HPO definition and a theoretical framework for HPO were arrived at.

Chapter 3 discusses the differences between public and private sector organisations, a model for high performance of a South African IT organisation and finally designing a definitive high performance organisation.

CHAPTER 3: THE DEVELOPMENT OF A THEORETICAL HIGH PERFORMANCE MODEL

"With the number and complexity of changes increasing, it's time to rethink how we design organisations." – McLagan, 2003

3.1 INTRODUCTION

This chapter examines the differences between public and private sector organisations as a background to the organisation used in this study. Secondly, the chapter discusses the relevant HPO model for high performance of a South African IT organisation. The various HPO frameworks and models found in the literature study (Chapter 2) are then evaluated according to certain criteria, to arrive at the HPO framework or model which adheres to all criteria. Finally, a definitive high performance framework is proposed.

3.2 CREATING HIGH PERFORMANCE PUBLIC SECTOR ORGANISATIONS

3.2.1 Private versus public sector organisations

Organisations are becoming artefacts of a time when life was more static: in the past stability and constancy was rewarded, and government organisations served us well. Flexibility, adaptability, responsiveness, learning, and continuous improvement is valued, and organisations do not change on their own, rather government organisations should be reinvented to meet new demands and challenges (Popovich et al., 1998). The public sector represents a large part of a country's economy and it is continually growing (Immordino, 2010; Soni, 2011; Stevens, 2005). Governments at all levels are undergoing fundamental change within many spheres, namely political, economic, social, and technological in response to pressing challenges that should be addressed (Reddy, 2008). Globally, governments are under increasing pressure to improve their service quality, which includes efficiency, effectiveness, and responsiveness (Immordino, 2010).

The public has, in recent years, witnessed the successful transition in many private organisations to more results-based management – many organisations now do more with less. As consumers, we demand that organisations focus on value, quality, innovation, and customer service. These same aspects we also demand from the public sector. Fiscal pressures and voter demand for better performance also motivate change to improve productivity and quality in whatever they do. In the same way, a changing workforce and technological improvements also converge to make change necessary and possible. However, these changes are part of a broader reshaping of employees' attitudes towards work and their organisations. It is important for all government employees to understand why government should make this somewhat painful transition to a new form of management and operation (Popovich et al., 1998).

Boyne (2003) believed that governments were searching for ways to improve public services, a view that is supported by Sowa, Seldon, and Sandfort (2004) who stated that globally citizens are increasingly demanding that public sector organisations improve their service delivery – they want to see an acceptable return on the taxes they pay to government at all levels. Waheed, Mansor, and Ismail (2010) added to this by stating that, to maintain their credibility and attract a level of public funding, public sector organisations must assess their performance and take the necessary steps to address problems and weaknesses, especially in these times of rapid changes in the economic and institutional environment and an increased competition for scarce resources. For performance to improve, it should be defined and evaluated.

De Waal (2010) supported this view and stated that, in the past few decades, many attempts have been made to improve performance in the public sector, all of which have had mixed and sometimes detrimental results. Thus, there is an increasing demand for methods that enable organisations to achieve sustainable high performance. De Waal (2010) developed his HPO framework with five HPO factors necessary for achieving high performance (see Chapter 2). Application of these factors within the public sector seems to have a different emphasis, that is for-profit organisations need to focus on all five HPO factors to become and

stay an HPO, whereas public sector organisations initially need to concentrate on the HPO factors of *long-term commitment* and *quality of management*.

Authors in support of this view maintain that the difference in the HPO emphasis between the public and private sectors is consistent with the main differences between the two sectors (Andersen & Lawrie, 2002; Moriarty & Kennedy, 2002; Pollitt, 2003):

- *Responsibility structure* - The responsibility structure in a private organisation is relatively simple, with a management team and a board of directors. By contrast, in a public organisation a political leadership is responsible for formulating the strategy and an executing leadership is responsible for implementing the strategy. Many conflicts may be caused by this division of leadership and responsibilities in public organisations.

- *Resources* - Public and private organisations both have material assets (e.g. capital) and immaterial assets (e.g. employees) at their disposal. However, public sector organisations have an important asset that distinguish them from private organisations, namely, political power, resulting from the activities they perform (e.g. tax collection, law enforcement, environmental legislation).

- *Strategy and added-value creation* - For private organisations managing this aspect of the organisation is relatively simple, in which value (i.e. return on investments) must be created for the organisation's shareholders. Added value, for public sector organisations, is defined by supervisory agencies, which often have conflicting interests (e.g. citizens who resist higher taxes versus social security recipients who desire more benefits) (Dewatripont, Jewitt, & Tirole, 1999).

- *Clients and customer satisfaction* - Public organisations find it more difficult than private organisation to increase customer satisfaction as they may be forced to act against the interest of their clients (i.e. increasing public security may go against people's freedom of movement). It is also not always clear who exactly the clients of a public agency are (i.e. in private organisations customers pay for and receive products or services, while in public sector organisations citizens pay taxes without

directly benefiting from it). What is also difficult to define are the goals of a public agency and, consequently, measure its results (Thiel & Leeuw, 2002).

The first two differences (responsibility structure and resources) relate to the HPO factor *quality of management*, while the last two differences concern its *long-term commitment* (De Waal, 2010).

3.2.2 What needs to be done in the public sector?

Popovich et al. (1998) found that, when they were looking at different strategies to help organisations become more effective, efficient, and adaptable, common characteristics and themes emerged. Popvich et al. (1998) described the following characteristics or principles of HPOs, they: (a) Are clear on their mission; (b) Define outcomes and focus on results; (c) Empower employees; (d) Motivate and inspire people to succeed; (e) Are flexible and adjust nimbly to new conditions; (f) Are competitive in terms of performance; (g) Restructure work processes to meet customer needs; and (h) Maintain communications with stakeholders.

De Waal (2008; 2010) conducted HPO research in which the public sector was adequately represented, as the worldwide survey collected data on 623 public organisations. Thus, the statistical analysis of the data and the five HPO factors derived from that may be considered relevant for public organisations. Public managers gain insight into the HPO factors and characteristics that create a high-performance government organisation and knowledge of the HPO factors enables management to determine the HPO status of their own organisation. The following illustration depicts the HPO status of the public sector worldwide:

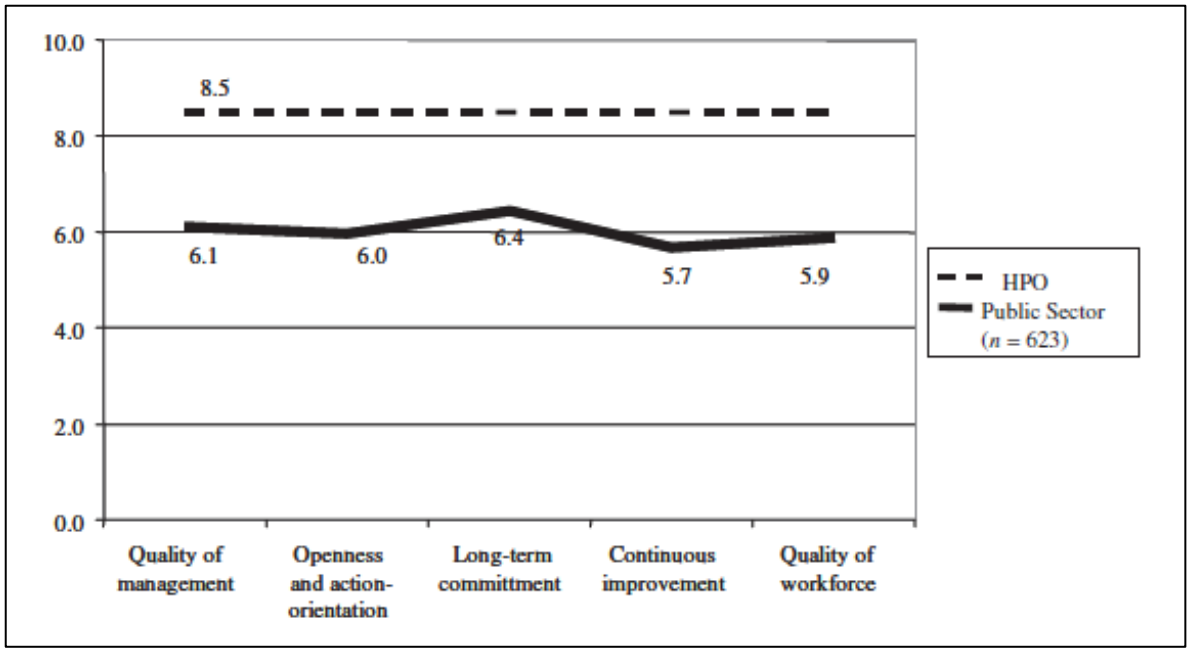


Figure 3.1: The HPO status of the public sector worldwide (De Waal, 2010, p. 90)

Figure 3.1 shows that a culture of mediocrity exists in the public sector (van der Wal, 2007): the average HPO score for the public sector worldwide is 6.0 an HPO scores 8.5 or higher (De Waal, 2008), suggesting a high potential for improvement for public sector organisations. The results indicate that the HPO factor long-term commitment yields relatively high scores for the public sector. Considering the nature of public sector organisations, it is not surprising that servicing the customers (7.0) and maintaining long-term relationships with all stakeholders (6.8) are relatively high scores. From this study, six improvement themes were identified that management of public sector organisations can focus on to ensure that an excellent public sector will be created that is ready for future challenges. The six themes correlate with respective HPO characteristics De Waal (2010) identified, as discussed in Chapter 2. The six themes are (De Waal, 2010):

1. *Improve the 'aura' of public sector managers (HPO characteristics 12, 17, 20, 27 and 34)* - It is important that management of public sector organisations work on creating inspirational leadership in the sector, therefore the HPO factor quality of management is the most important to the public sector. An 'aura of inspiration' can be obtained by public sector managers being role models for employees and for each other; coaching their staff to achieve extraordinary results and leading these endeavours themselves; allowing staff to make mistakes while experimenting and making mistakes

themselves; being as effective as possible; and getting everybody, including themselves, to achieve extraordinary results (Pate, Beaumont, & Stewart, 2007). Public sector managers must become high-performance managers, that is guided by client focus principles, continuous improvement and quality (Angelim & de Aquino Guimarães, 2005; Nanus & Dobbs, 1999). It is therefore also important to retain these high-performance managers for as long as possible (Anderson, 2004; Soo-Young & Whitford, 2008).

2. *Strengthen the resoluteness of management (HPO characteristics 18, 19 and 25):* Managers should be resolute to instil confidence in their employees; therefore, managers must be more action orientated (Kim, 2010). Managers should also be more decisive regarding non-performers by dealing with them as quickly and efficiently as possible, within legal boundaries. A training program can be set up for manages in which training-on-the-job and coaching-on-the-job are main elements in becoming more resolute (Wolf & Sherwood, 1981; Yu, 2007).

3. *Become more innovative to be able to service the clients better (HPO characteristics 1, 7, 8 and 30)* - The organisation should develop a 'manifesto' to explain how it will add more and more value to society. This entails developing a strategy that explains what differentiates the organisation from the rest relating to its services to society and then continuously improving and renewing the core competencies, products and services so that society is serviced as best as possible. By doing this the social added value that public sector organisations should have, will increase (Callahan, 2007; Cole & Parston, 2006).

4. *Improve the performance management process of the organisation (HPO characteristics 5 and 6)* - Critical success factors, key performance indicators that measure client dedication and the important processes in the organisation that increase the performance on client dedication need to be included in the performance management reports. Everyone in the organisation then needs to understand these reports to create awareness of the key areas in which the public sector organisation is striving to excel (Callahan, 2007; Mayne & Zapico-Goñi, 1997; Ramseook-Munhurrun, Lukea-Bhiwajee, & Naidoo, 2010).

5. *Improve process management within the organisation (HPO characteristics 3 and 4)* - Processes should really be improved, simplified and aligned to strengthen the

organisation's client dedication. A training programme should be set up to accomplish this task and a dedicated process manager appointed who will watch over the quality of the process of improvement (Mihyar, Hayder, & Muhammad, 2007; Ongaro, 2004; Rhee & Rha, 2009; Weeks & Bruns, 2005).

6. *Increase the quality of the workforce (HPO characteristics 10, 11 and 28)* - The focus for public sector organisations should be on increasing the quality of employees by training them to be more flexible and resilient. Employees should also spend more time on communicating and exchanging knowledge and best practices within and outside the organisation. The recruitment process should aim to attract and hire employees who want to be challenged by management to achieve extraordinary results. Coaching of these employees is then integral for them to be transferred to management level (Collins, 2008; Kim, 2010).

Achieving high performance in the public sector is possible but might have to be approached from a different angle than high performance in the private sector. As this study was conducted in South Africa, it is important to discuss government as part of the public sector, particularly in the South African context.

3.3 GOVERNMENT AS PART OF THE PUBLIC SECTOR

3.3.1 Principles of Government and Public Administration in the South African context

The principles of *government* in South Africa are set out in its Constitution (Government Gazette, 1996), which according to Section 40-41, are:

40. Government of the Republic. -- (l) In the Republic, government is constituted as national, provincial, and local spheres of government which are distinctive, interdependent and interrelated.

(2) All spheres of government must observe and adhere to the principles in this Chapter and must conduct their activities within the parameters that the Chapter provides.

41. Principles of co-operative government and intergovernmental relations. -, (I) All spheres of government and all organs of state within each sphere must-

a) preserve the peace, national unity and the indivisibility of the Republic;

b) secure the well-being of the people of the Republic;

c) provide effective, transparent, accountable and coherent government for the Republic as a whole;

d) be loyal to the Constitution, the Republic and its people;

e) respect the constitutional status, institutions, powers and functions of government in the other spheres;

f) not assume any power or function except those conferred on them in terms of the Constitution;

g) exercise their powers and perform their functions in a manner that does not encroach on the geographical, functional or institutional integrity of government in another sphere; and

h) co-operate with one another in mutual trust and good faith by-

    i. fostering friendly relations;

    ii. assisting and supporting one another;

    iii. informing one another of, and consulting one another on, matters of common interest;

    iv. co-ordinating their actions and legislation with one another;

    v. adhering to agreed procedures; and

vi. avoiding legal proceedings against one another.

The principles of *public administration* in South Africa are set out in its Constitution (Government Gazette, 1996), which according to Section 195 are:

195. Basic values and principles governing public administration. - (I) Public administration must be governed by the democratic values and principles enshrined in the Constitution, including the following principles:

a) A high standard of professional ethics must be promoted and maintained.

b) Efficient, economic and effective use of resources must be promoted.

c) Public administration must be development-oriented.

d) Services must be provided impartially, fairly, equitably and without bias.

e) People's needs must be responded to, and the public must be encouraged to participate in policymaking.

f) Public administration must be accountable.

g) Transparency must be fostered by providing the public with timely, accessible and accurate information.

h) Good human-resource management and career-development practices, to maximise human potential, must be cultivated.

i) Public administration must be broadly representative of the South African people, with employment and personnel management practices based on ability, objectivity, fairness, and the need to redress the imbalances of the past to achieve broad representation.

(2) The above principles apply to- (a) administration in every sphere of government; (b) organs of state; and (c) public enterprises.

(3) National legislation must ensure the promotion of the values and principles listed in subsection (1).

(4) The appointment in public administration of a number of persons on policy considerations is not precluded, but national legislation must regulate these appointments in the public service.

(5) Legislation regulating public administration may differentiate between different sectors, administrations or institutions.

(6) The nature and functions of different sectors, administrations or institutions of public administration are relevant factors to be considered in legislation regulating public administration.

Public sector organisations can therefore also function as HPOs, and to that end, some organisations have adopted the South African Excellence Model (SAEM).

3.3.2 The South African Excellence Model

According to Williams (2008) South Africa has come a long way over the years in its approach to quality. He believed that the future of any economy, industry and business is tied to the global economy and without focusing on quality; countries will not achieve success when engaging with the international market. For businesses to be successful in they need to be quality aware and quality driven, as business is one of the drivers of any economy.

A group of concerned South African organisations met in 1990, to discuss quality related challenges in South Africa. As a result, the South African Quality Institute (SAQI) was established in 1993. The SAQI acts as a global go-between to facilitate business connections, two-way trade and exchange of useful information for all South Africans and SAQI members

and acts as a catalyst and a promoter in bringing quality events within reach of the South African public (SAQI, 2007).

In 1997, the South African Excellence Model (SAEM) was launched and is based on the experiences of the European Forum for Quality Assurance (EFQA) and the Malcolm Baldrige National Quality Award (MBNQA) based on the Baldrige Excellence Framework. It is a non-prescriptive framework for management education, organisational self-assessment and continuous performance improvement. The model is non-prescriptive in that there is no prescribed method for or approach to the achievement of sustainable organisational excellence. It is a powerful diagnostic self-assessment tool that can be utilised for identifying organisational strengths and areas of improvement (Williams, 2008).

The SAEM was established to assist South African organisations to assess their levels of efficiency and effectiveness, identify business areas that needed improvement and institute significant performance improvements to achieve higher levels of competitiveness in the global marketplace. The model's strengths lie in identifying good management practices. It drives continuous improvement and allows organisations to benchmark themselves against global businesses (Williams, 2008).

The SAEM consists of 11 criteria which apply to all organisations. The criteria are designed to assist organisations to enhance their competitiveness through focus on result-orientated goals. The criteria are built on a set of core values and concepts which form the foundation for integrating key business requirements. These core values and concepts include (Olivier, 2014; Williams, 2008): (a) Customer focus/customer driven quality; (b) Leadership creating strategies and setting direction; (c) Continuous improvement and learning; (d) Employee participation; (e) Process management; (f) Management by fact; (g) Role model leadership; and (h) Partnership development.

The South African Excellence Model can be illustrated as follows:

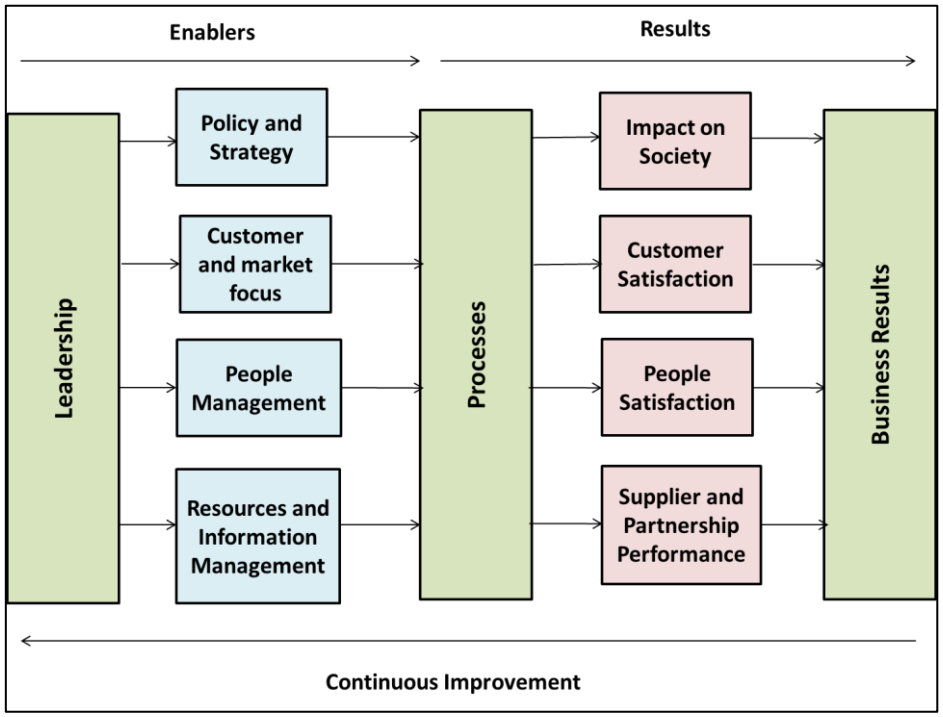


Figure 3.2. The South African Excellence Model (SAEM) (Adapted from Williams, 2008, p. 42)

The underlying assumption of the model is that customer satisfaction, people (employee), impact on society and supplier and partnership performance are achieved through leadership that drives policy and strategy, customer and market focus, people management, resource and information management, and processes to achieve business results (Strydom, 2002). Olivier (2014, p. 170) illustrates the SAEM criteria for Local Government as follows:

Table 3.1

The South African Excellence Model criteria for local government (Olivier, 2014, p. 170)

No	Criterion Name	Weight	Criterion Definition
1	Leadership	10%	How the behaviour and actions of the executive team and all the other leaders inspire, support and promote a culture of business excellence
2	Policy & strategy	7%	How the organisation formulates, deploys, reviews, and turns policy and strategy into plans and actions
3	Community & customer focus	6%	How the organisation determines needs, requirements, expectations; enhances relationships, and determines satisfaction of communities, customers and markets

No	Criterion Name	Weight	Criterion Definition
4	People management	7%	How the organisation releases the full potential of its people
5	Resource & information management	6%	How the organisation manages and uses resources and information effectively and efficiently
6	Processes	12%	How the organisation identifies, manages, reviews and improves processes
7	Social responsibility	6%	What the organisation is achieving in satisfying the needs and the expectations of the local, national and international, community at large (as appropriate)
8	Community & customer	17%	What the organisation is achieving in relation to the satisfaction of its external customers
9	People satisfaction	9%	What the organisation is achieving in relation to the satisfaction of its people
10	Supplier & partnership performance	3%	What the organisation is achieving regarding the management of suppliers and partners
11	Business results	15%	What the organisation is achieving in relation to its planned business objectives and in satisfying the needs and expectations of everyone with financial interest or a stake in the organisation

Different relationships exist between the various criteria of the model, for example, people management will impact on employee satisfaction; policy and strategy will have an impact on society as well as on business results; customer and market focus will impact on customer satisfaction (Williams, 2008).

Olivier (2014) was of the view that the SAEM is a useful assessment framework for measuring the total functioning of an organisation, regardless of whether the organisation is within the private or public sector. Within the framework, the goal, internal processes, and the strategic constituencies approaches to organisational effectiveness are addressed. It does not however directly address the system resource nor the conflicting values approaches. Furthermore, this model was not developed to measure organisational effectiveness in metropolitan municipalities but rather developed and adapted to measure the performance of public or private sectors. Therefore, to some extent it might be relevant to measure performance of the participating IT organisation.

Considering high performance in the public domain, the road to high performance of the South African IT Organisation relevant to this study will be discussed in the next section.

3.4 SOUTH AFRICAN IT ORGANISATION: A MODEL FOR HIGH PERFORMANCE

The following is a discussion of how a South African IT Organisation, which is also a State-Owned Entity (SOE) designed and developed a model for high performance.

3.4.1 Turnaround Framework for transformation

In 2010, the South African IT SOE under discussion embarked on a turnaround plan to address serious issues. As part of the Turnaround Framework, the organisation identified five Turnaround Pillars that were the focus areas of transformation, namely (South African IT Organisation, 2015-2019):

1. *Services:* The business units and capabilities that produce or render ICT related goods and services to an organ of state at a price (revenue generating); where goods and services comprise of mandatory and non-mandatory services, but excluding those duties that are deemed “Procurement” (Pillar 2) and “Agency” or “Regulatory” role (Pillar 3).
2. *Procurement:* The business units and capabilities that procure ICT goods and services from the ICT Industry (suppliers) for or on behalf of an organ of state.
3. *Regulatory / Agency role*: The business units and capabilities that fulfil the role of ICT Regulator including the duties to set standards for interoperability and security, certify goods and services against those standards, Research and Development, develop and maintain an Inventory of Government Information Systems and develop an Information Systems convergence strategy.

4. *Stakeholder, image, reputation:* The business units and capabilities that manage customer needs and expectations, foster good relationships and promote the brand and image of the organisation.
5. *Governance:* The organisational bodies and structures that collectively provide strategic direction, policy, and ethics of the organisation, and ensure performance and conformance thereto.

From a Scenario Analysis Technique, the following Key Drivers were identified as critical to success of the Turnaround Strategy:

- Value proposition.
- ICT leadership (and Government ICT plans and roadmaps).
- Service delivery.
- Demand and supply.
- Pricing and sustainability.

One of the many initiatives the organisation then embarked on was to develop a high performance model that the organisation could achieve and maintain.

3.4.2 Development of a model for high performance

The organisation's Organisational and Sourcing and Development teams embarked on an extensive research process to develop a model for high performance. The model involved 11 interdependent factors which were categorised to assist in analysing the (then) performance context, a proposed future desired state to attain high performance and to identify gaps and inconsistencies between them.

The HPO model of the relevant organisation can be depicted as follows:

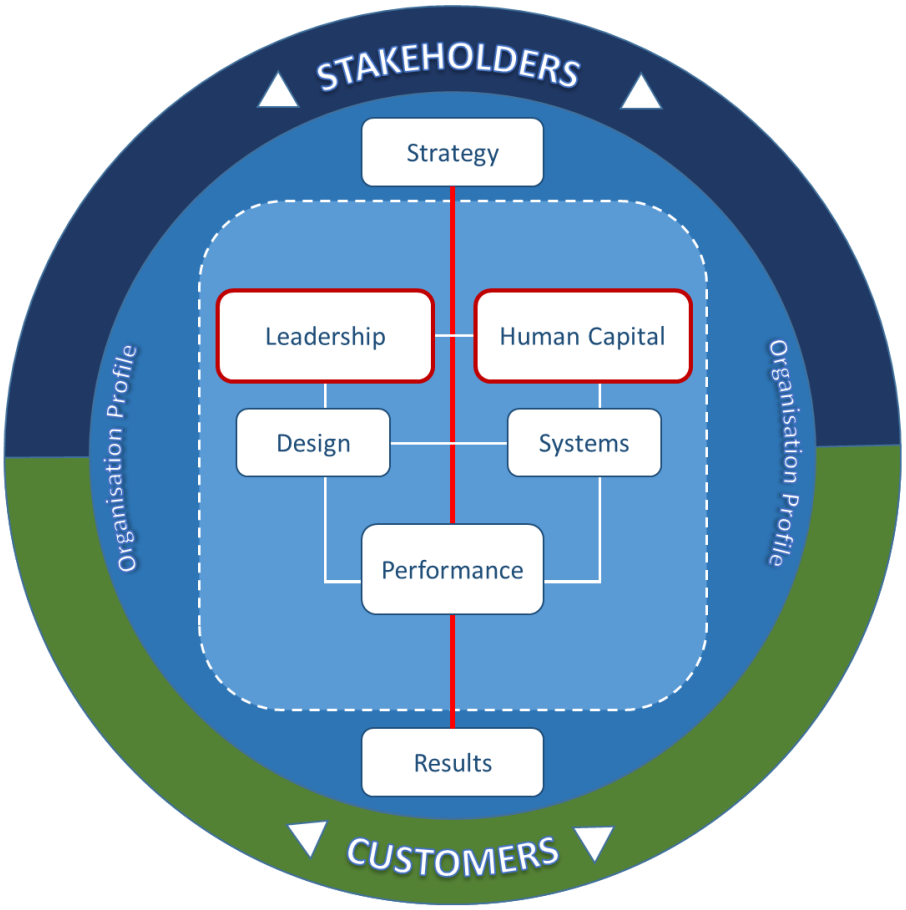


Figure 3.3. The South African IT organisation's HPO model (Strategy 2015 – 2019)

The organisation's HPO model is depicted to reflect the interdependency of the elements. It is therefore to be understood that as a multi-dimensional model each element is crucial. The elements are:

- *Organisation profile:* The organisation's responses to those **environmental factors** that have financial, operational, relational, and reputational challenges or impacts.
- *Stakeholders:* Understanding and responding to the **stakeholder needs**, wants, and **expectations** dictates the organisation's high performance from its perspective. The organisation engages stakeholders appropriately through strong partnerships and alignment to adhere to the mandate of the Act that governs the organisation.

- *Customers:* Characterises the **engagement strategies** with organisation's customers that is based on strong **partnership** to demonstrate that the organisation understand the customers' wants, needs, and expectations, both now and in the future.

- *Strategy:* The **strategic choices** made which is formulated in a manner that articulates the organisation's **responsiveness** to both internal and external factors to enable us to maintain competitiveness and relevance in the business space.

- *Leadership:* The transformational **leadership style** adopted and evident throughout all levels in the company to set clear direction on how to achieve the organisation's strategic intent.

- *Human capital:* The organisation's **employees** are managed to drive the sum of the organisational capabilities for value creation and to **attract**, **retain and manage** high-performance talent which supports the organisation's strategic intent.

- *Culture:* The **values**, **behaviour, beliefs, norms, and standards** practiced by all in pursuit of the organisation becoming an HPO.

- *Design:* The organisational architecture that is informed by in-depth knowledge of customers', their needs, wants and expectations. The design is customer-focused and team-oriented to drive collaboration across organisation boundaries to effectively deliver our products and services.

- *Systems:* The technology systems that are used daily by management and employees that are geared to the value-creation processes to manage different categories of customers.

- *Performance:* The process that creates a clear link between organisational strategy and individual jobs which enables organisation integration and the realisation of strategic outcomes.

- *Results:* The strategic outcomes that the organisation achieve to satisfy its stakeholder requirements. This may include process outcomes, customer outcomes, benchmark outcomes, improvement outcomes, and financial outcomes and is characterised by continuous improvement.

Refer to Annexure 1 for a more detailed description of the HPO elements.

The organisation designed a detailed HPO framework with various aspects determining high performance. The literature discussed in Chapter 2 is also quite extensive. So which model / framework is the "best"? The next section explores this question and evaluates the existing frameworks and models according to a defined set of criteria.

3.5 DESIGNING THE ULTIMATE DEFINITIVE HIGH PERFORMANCE ORGANISATION

Dr Erik Belt (2008) from the HPO Center in the Netherlands conducted a comparison of 26 studies of HPOs. His criteria for evaluation have been customised for the purposes of this research study. The different HPO models and/or frameworks discussed in Chapter 2 were analysed and compared using the following criteria (Belt, 2008, p. 2):

a) *Representative:* Is the study representative? In other words, is the sampling used in the study sufficiently large?

b) *Statistically sound:* Are the final conclusions in the publication sufficiently substantiated by statistical analyses?

c) *Control group:* Were the findings tested with a relevant control group to determine whether the characteristics identified really did make the difference?

d) *Period:* Was the study period sufficient to draw conclusions that are not affected by time?

e) *Relevant:* Is the study broad enough that the conclusions are relevant to 'all' organisations (profit, non-profit and government)?

f) *Applicable:* Are the findings applicable in practice? In other words, did they result in a set of decisive HPO characteristics? Is a diagnosis model available? And has an implementation method been described?

g) *Universal:* Can the findings be applied universally? In other words, does the study have a global set-up and was the control group internationally representative?

The legend for evaluation is designed as follows:

Table 3.2

Legend for evaluation - Letters (Adapted from Belt, 2008, p. 3)

Legend	
R	Representative
S	Statistically sound
C	Control group
P	Period
Re	Relevant
A	Applicable
U	Universal

Table 3.3

Legend for evaluation – symbols (Adapted from Belt, 2008, p. 3)

Yes	✓
No	✗
Inconclusive	?

Table 3.4 depicts the evaluation of the various HPO frameworks and models discussed in Chapter 2. Each of the HPO frameworks and/or models is evaluated per row, according to the criteria set out above.

Table 3.4

Evaluation of various theoretical HPO frameworks (Adapted from Belt, 2008, p. 3)

Researcher(s)	HPO Characteristics	R	S	C	P	Re	A	U
Schaffer (1988)	• Sense of urgency. • A challenge. • Success near and clear. • People collaborate – a new 'esprit'. • Pride of achievement. • Fear of failure. • Exciting, novel, like a game. • People experiment and ignore 'red tape'.	✓	×	×	✓	✓	✓	?
Mohrman & Cummings (1989)	• Multiple information-processing systems. • Self-contained units. • Flexible structures. • High-involvement practices.	✓	×	×	✓	✓	✓	×
Pasmore (1994)	• Flexible people. • Flexible (new) technology. • Flexible work (teamwork and collaboration). • Flexible thinking. • Flexible managers. • Fractal organisation design (order in chaos).	✓	×	×	✓	✓	✓	×
Mills (1994)	• Fault tolerance. • Building trust. • Vision. • Setting goals. • Measurement. • Motivation.	×	×	×	×	✓	✓	✓
Duques & Gaske in	• Act like a small company (i.e. satisfy clients	×	×	×	×	×	×	×

Researcher(s)	HPO Characteristics	R	S	C	P	Re	A	U
Drucker (1997)	and strive to retain them). • Create an urgency for innovation. • Create a lean, value-added corporate function. • Create an energizing culture.							
Goldsmith & Clutterbuck (1997)	The Winning Streak: • Leadership. • Autonomy. • Control. • Involvement. • Market orientation. • Zero-basing. • Innovation. • Integrity.	✓	×	✓	✓	×	×	×
Heller (1997)	• Devolve leadership. • Drive radical change. • Reshape culture. • Divide to rule. • Exploit the organisation. • Keep the competitive edge. • Achieve constant renewal. • Manage the motivators. • Make team-working work. • Achieve total management quality.	×	×	×	×	×	×	×
Butteriss (1998)	• Create a common company-wide vision and value system. • Develop a “competency-based” personnel framework. • Provide leadership assessment and development. • Move people within the company for best	×	×	×	✓	×	×	×

Researcher(s)	HPO Characteristics	R	S	C	P	Re	A	U
	advantage. • Guarantee the workplace diversity that allows success in a company's varied national and global markets. • Handle the question of change • Re-engineer the corporate HR function as a consulting centre to company management.							
Hodgetts (1998)	• Focus on the customer. • Train and develop the associates. • Measure the operating results. • Evaluate and develop the personnel. • Recognise and reward accomplishments. • Keep on going.	×	×	×	×	×	×	×
Lawler, Mohrman & Ledford (1998)	• Employee involvement. • Total quality management. • Reengineer.	✓	✓	×	✓	×	×	×
Popovich (1998)	HPOs: • Are clear on their mission. • Define outcomes and focus on results. • Empower employees. • Motivate and inspire people to succeed. • Are flexible and adjust nimbly to new conditions. • Are competitive in terms of performance. • Restructure work processes to meet customer needs. • Maintain communications with stakeholders.	✓	×	×	◈	✓	×	×
Volberda (1998)	Resolving the paradox of flexibility: • The managerial task: flexible capabilities. • Changing organisational forms. • The organisation design task: reducing	✓	×	×	✓	×	×	×

Researcher(s)	HPO Characteristics	R	S	C	P	Re	A	U
	organisational barriers. • Changing competitive forces.							
Haeckel (1999)	Sense-and-respond model, creating an adaptive organisation.	×	×	×	×	×	×	×
O'Reilly III & Pfeffer (2000)	People-centred approach: • Values and culture first. • Alignment and consistency. • Leading, not managing.	✓	×	×	✓	×	×	×
Collins (2001)	• Level 5 Leadership. • First who…then what. • Confront the brutal facts (yet never lose faith). • The Hedgehog Concept (simplicity within the three circles). • A Culture of discipline. • Technology accelerators. • The Flywheel and the Doom Loop.	✓	✓	×	✓	✓	✓	×
Foster & Kaplan (2001)	• Invisible architecture that fosters creation, operations and trading. • Technical vs. adaptive work. • Setting standards for management effectiveness. • Applying divergent thinking. • Design the strategic planning process. • Reconceptualising research and development. • Reconceptualising corporate venture capital. • Balancing control, permission and risk. • Setting the pace and scale of change.	×	×	×	✓	✓	×	×
Hammer (2001)	Nine agenda items to HPO: • Make it easy for your customers to do business with you.	✓	×	×	✓	×	×	×

Researcher(s)	HPO Characteristics	R	S	C	P	Re	A	U
	• Add more value for your customers. • Create a process enterprise. • Tame the beast of chaos with the power of process. • Base managing on measuring. • End the tyranny of the organisational chart. • Distribute for, not to, the final customer. • Redesign and streamline interenterprise processes. • Embrace the radical vision of virtual integration.							
Mische (2001)	The five pillars of HPO: • Leadership. • Innovation. • Information technology. • Operational excellence and agility. • Knowledge.	✓	×	×	✓	×	×	×
Owen, Mundy, Guild & Guild (2001)	A HPO can be achieved when five core elements are aligned: • Senior leaders' perception of the marketplace. • A shared vision, mission, values, and strategies. • Leadership practices that are congruent with the vision, mission, values, and strategies. • Infrastructures which support and reinforce the vision, mission, value,s and strategies. • Employee behaviours that meet customer needs.	⍰	×	×	⍰	×	✓	×
Osborne & Cowen (2002)	HPO characteristics: • The culture of high performance.	×	×	×	×	×	×	×

Researcher(s)	HPO Characteristics	R	S	C	P	Re	A	U
	• The people. • The management systems.							
Cheyfitz (2003)	• The Basic Box: Some things never change • The Jack in The Box: Profits • The Money Box: Cash is everything. • The Bottom-Line Box: Knowing what can be controlled and what cannot. • The Box Top: Customers are the boss. • The Marketing Box: Unifying the whole business. • The Getting-Bigger-Faster Box: "If you can buy it, don't start it up". • The People Box: Hire smart or manage hard. • The Treasure Box: Secure the real assets. • The Ends-Over-Means Box: Results are more important than process. • The Renewable Box: Nothing lasts forever. • The Houdini box: Always have an exit strategy.	×	×	×	✓	✓	×	×
Joyce, Nohria & Roberson (2003)	Primary Management Practices: • Strategy. • Execution. • Culture. • Structure. Secondary Management Practices: 1. Talent. 2. Leadership. 3. Innovation. 4. Mergers and partnerships.	✓	✓	×	✓	✓	✓	×
Sull (2003)	Three-step framework: • Select an anchor.	✓	×	×	×	×	×	✓

Researcher(s)	HPO Characteristics	R	S	C	P	Re	A	U
	• Secure the anchor. • Realign the rest of the organisation.							
Annunzio (2004)	• Value people. • Optimize critical thinking. • Seize opportunities. • Build it and they will come.	✓	×	×	✓	×	×	×
Holbeche (2005)	• Developing organisational change-ability. • Creating a knowledge-rich context for innovation. • Creating a boundaryless organisation. • Stimulating people to sustainable levels of high performance. • Becoming a great place to work. • Becoming a values-based organisation.	✓	×	×	✓	✓	×	×
Light (2005)	Four pillars of robustness: • Alertness. • Agility. • Adaptability. • Alignment.	✓	×	×	✓	✓	×	×
Beer (2009)	• Performance alignment. • Psychological alignment. • Capacity for learning and change.	✓	✓	×	✓	?	✓	?
Nel & Beudeker (2009)	The Beehive: • Strategy execution. • Structures. • Talent creation. • Business disciplines. • Stakeholder values. • Reward and recognition. • Change leadership.	✓	✓	×	✓	✓	✓	✓

Researcher(s)	HPO Characteristics	R	S	C	P	Re	A	U
Akdemir, Erdem, & Polat (2010)	• Well-understood vision and values. • Flexibility and the proper use of discipline. • Setting clear and specific goals. • Strong communication. • Trust and confidence. • Fun. • Decision making at the lowest level. • Effective training. • Performance feedback. • A stronger, more consistent customer focus and total quality. • Multiple methods of measuring improvement. • Strategic change management. • Encouragement of innovation and openness to technology. • Team based work. • Participative leadership. • Effective incentive system. • Recruiting and hiring the best talent. • Work-life balance. • Workplace diversity. • Motivation. • Compensation and Performance appraisal. • Knowledge Management. • Meaningful and purposeful work. • Effective succession planning. • Effective planning and analysis. • Ethical decision making and peer respect.	✓	×	×	✓	✓	×	×
Gupta (2011)	A multi-faceted (five strategic facets), multi-dimensional (five-cultural techniques), and a	✓	✓	×	✓	✓	×	✓

Researcher(s)	HPO Characteristics	R	S	C	P	Re	A	U
	multi-level (organisational and societal) approach to the development of high-performing systems will help organisations foster and sustain an open culture, where cultural sensitivities are addressable through a climate of exchange and mutual give and take.							
Cocks (2012)	• Effective execution. • Perfect alignment. • Adapt rapidly. • Clear and fuzzy strategy. • Leadership, not leaders. • Looking out, looking in. • Right people. • Manage the downside. • Balance everything.	✓	✓	✗	✓	✓	✗	✓
De Waal (2012)	Five HPO factors: • High-quality management. • High-quality employees. • Long-term orientation. • Continuous improvement and innovation. • Open and action-oriented.	✓	✓	✓	✓	✓	✓	✓
Participating Organisation's HPO Model	• Strategy. • Leadership. • Human Capital. • Design. • Systems. • Performance. • Results.	✓	✗	✗	✓	✓	?	✗

Table 3.4 clearly depicts how the various HPO frameworks and models compare to each other. Of the 33 HPO studies 23 are representative, 10 are not and one is inconclusive. This indicates that researchers aim to make use of sufficiently large samples when studying high performance. Eight of the studies are statistically sound, while 25 are not. This finding is quite concerning as it indicates that researchers tend to not make use of empirical research when designing their frameworks or models. Consequently, it begs the question of validity and how practitioners can then comfortably apply the frameworks and models in practice. Two of the studies made use of a control group, while 31 did not. This is indicative of preferences of researchers to design HPO frameworks and/or models and test them on a case study basis, rather than using control groups for comparison purposes. The period of study was long enough in 23 of the studies but not in eight of them and two are inconclusive. The latter points out that the researchers invested much time into testing their HPO frameworks and/or models to determine whether they work or not. This could possibly the reason for not engaging in empirical research as such. Seventeen of the studies are relevant to all types (profit, non-profit and government) of organisations, while 15 are not and one is inconclusive. This again shows concern when implementing the HPO frameworks and/or models in practice. Only 10 of the studies appear to be applicable in practice with a diagnostic model and clear implementation method, while 22 are not and one is inconclusive. This indicates that, although researchers design HPO frameworks and/or models, they tend to not depict how the implementation thereof. A hypothesis could be that it is not the intention of all researchers to demonstrate implementation of their framework and/or model, but rather only explain the framework and/or model itself. Finally, only six of the studies are universal, while 25 are not and two are inconclusive. It seems researchers did not attempt to test their frameworks and/or models globally.

Evaluation of the organisation relevant to this study's HPO framework/model revealed the following:

a) *Representative:* The sampling used in the study is sufficiently large. The total number over the six-year period is 3,451.

b) *Statistically sound:* The final conclusions in the publication were not sufficiently substantiated by statistical analyses.

c) *Control group:* The findings were not tested with a relevant control group to determine whether the characteristics identified really did make the difference.

d) *Period:* The study period was sufficiently long enough to draw conclusions that are not affected by time. The study stretches over six years.

e) *Relevant:* The study is broad enough that the conclusions are relevant to 'all' organisations (profit, non-profit and government). The reason for this is that the HPO characteristics are quite generic and not specific to either IT or the public service and can therefore be applied to all organisations.

f) *Applicable:* At this point, it is challenging to determine if the findings are applicable in practice. Even though there are a set of decisive HPO characteristics, a diagnosis model is available, and an implementation method has been described, the framework has not yet been implemented.

g) *Universal:* The study does not have a global set-up and the control group was not internationally representative.

The evaluation therefore clearly indicates that statistical analysis is required to validate the HPO model of the organisation as well as the survey.

3.6 TOWARDS A MODEL OF HIGH PERFORMANCE

3.6.1 Analysis of HPO frameworks and models

Considering the evaluations conducted above, De Waal's (2012) study appears to be the most relevant and will be used as a benchmark for the purposes of this research. Many reasons underpin this choice of HPO model, including the fact that the study had a global set-up, which included both the Western and Eastern world, and both developed and underdeveloped continents. The research also contains an implementation plan for improvement activities which makes it practical and easy to apply to any organisation (Belt, 2008).

Belt (2008) discussed the following reasons for using De Waal's research as a benchmark:

- Organisations were not selected, but rather potential HPO characteristics were selected.
- The study had an extremely broad scope and included as many relevant scientific studies as possible.
- The control group was selected randomly. The study, including the formation of the control group, had a global set-up, which included both the Western and Eastern world, and both developed and underdeveloped continents.
- De Waal's research contains an implementation plan for improvement activities which makes it practical and easy to apply to any organisation.
- The testing of the findings took place randomly. Organisations that score highly on the five factors generally show better results than other organisations in their sector.
- The factors appear to be strongly interconnected and to mutually strengthen one another.
- Organisations can use the five HPO characteristics and corresponding HPO diagnosis in a targeted manner.
- Comparable organisations can be compared based on the findings of the HPO studies. The results of the analyses and comparison to other organisations form the basis for an implementation plan of improvement activities.

De Waal (2012) analysed his own study and discussed on his website how his work compares to some of the authors mentioned above (https://www.hpocenter.com/differences-hpo-and-other-studies-good-to-great-efqm-gptw-six-sigma/):

Many of the authors (Collins, 2001; Goldsmith & Clutterbuck, 1997; Mische, 2001; Osborne & Cowen, 2002) use financial analysis as a basis and selected organisations that perform well or excellent in a certain sector. They then compared these organisations to competitors that did not perform as well. From these comparisons, they then determined distinguishing characteristics. A weak point with this approach is the first selection: if not made carefully, it

challenges the validity of all other study results. The element of coincidence is always there, that is, was the correct information available and was the selection made based on the right criteria? An example is a large-scale longitudinal study Accenture is currently conducting, where the focus is on good performers among organisations quoted on the stock exchange. Many of these types of studies have the disadvantage that it is hardly possible to control what exactly is being studied and how this is processed (statistically or not). Very few of the studies were validated by other researchers or scientific institutions, as far as is known. Only some of the studies (Cocks, 2012; De Waal, 2012; Gupta, 2011; Mills, 1994; Nel & Beudeker, 2009; Sull, 2003) had a global set-up where the others focus on the Western (American) profit market and usually the Eastern countries are not considered, which makes universal generalisation a problematic issue. Finally, many of the studies do not contain any impetus to implement improvement activities (Annunzio, 2004; Belt, 2008, Butteriss, 1998; Duques & Gaske, 1997; Goldsmith & Clutterbuck, 1997; Haeckel, 1999; Hammer, 2001; Heller, 1997; Hodgetts, 1998; Lawler, Mohrman & Ledford, 1998; Mische, 2001; O'Reily III & Pheffer, 2000; Osborne & Cowen, 2002; Owen, Mundy, Guild & Guild; 2001; Sull, 2003; Volberda, 1998).

In the HPO Centre's research approach, not one selection of organisations was made in advance. A comprehensive literature search was conducted by the researcher, not only from professional literature, but also using studies with as many scientific disciplines as possible. In principle, this guarantees that all sorts of elements were included, that is structure, human, emotional, strategic, material, resources, HRM, etc. Respondents were randomly involved by showing up at workshops held at the HPO Centre all over the world which resulted in the broadest basis of all HPO studies conducted to date. Something that is also neglected in other studies, is examining what works and what does not – this was covered by the study conducted in the HPO Centre. This research included research in all branches, not only in the profit sector and in all countries, including Asia and the developing countries. The research clearly documented how the study was conducted, how the data was analysed, and processes and regular presentations are given about this at scientific conferences. As behaviours are objectively observed in practice, the so-called halo effect is combatted because the subjective opinions of respondents are no longer being inquired about (Belt, 2008; De Waal, 2012).

De Waal's (2012) study therefore appears to be the most comprehensive as it covers a variety of factors necessary to obtain high performance. Its applicability is also extensive, and the research has a global set-up.

Do & Mai (2020) postulate that De Waal (2012) notably attempted to review, synthesise, test, and conceptualise a new HPO framework. The framework was tested and confirmed in Vietnamese and Nepalese banking sector, in African institutions, in the Middle East, in a multinational retailer, in Thai organisations and in the diamond industry value chain. Since 2015, a variety of studies were conducted to evaluate the effect of the HPO framework in practice, including in information and communications technology companies in Egypt, in Dutch supermarket and agricultural sector, in Chinese state-owned enterprises, in North America and in social care and rehabilitation organisation in the Netherlands (Do & Mai, 2020). Zbierowski (2019) investigated if the effect of HPO characteristics (De Waal, 2012) has a direct effect on actual organisational citizenship behaviour and entrepreneurial orientation. It was found that a strong relationship exists between high performance indicators and organisational effectiveness. Research results also showed that there is a strong positive effect of high performance indicators on entrepreneurial orientation and organisational citizenship behaviour.

3.6.2 Discussion of top HPO framework/model

De Waal (2012) conducted research into what makes an HPO, over a period of five years, studying organisations throughout the world, representing nearly every continent. Two hundred and ninety studies were covered in the literature review and the study consisted of two phases. In Phase 1 53 potential HPO characteristics where identified and in Phase 2 these characteristics were included in a questionnaire presented to managers and employees working within profit, non-profit and governmental organisations from 50 countries. Statistical analysis revealed 35 characteristics which could be categorised into five HPO factors. Subsequently, De Waal (2012) created the following HPO Framework that includes five factors of high performance:

Figure 3.4. High Performance Organisation framework (Adapted from De Waal, 2012, p. 23)

The five most distinctive characteristics were determined for enabling an organisation to be decisive and to excel in the long term (De Waal, 2012):

1. *High-quality management*: Managers of excellent organisations are honest, decisive, action-oriented, performance-oriented, effective, self-confident and have a strong leadership style. The emphasis lies on a strong relationship of trust with employees and on coaching and facilitating. Employees and managers hold each other responsible and the managers are decisive with it comes to 'non-performers'.

2. *High-quality employees*: Employees assume responsibility and want to be held responsible, the total staff is diverse and complementary, employees are trained at increasing flexibility and resilience and want to be challenged to excel.

3. *Long-term orientation*: Continuity in the long term always comes before short-term profit, orientation towards collaboration with other organisations, orientation towards good long-term relationships with all stakeholders, orientation towards customer interest; managers are committed in the long term to the organisation and therefore often promoted from within.

4. *Continuous improvement and innovation*: The organisation has a distinctive strategy, processes are continuously improved, simplified and coordinated, the more relevant

and correct information is reported, and the core competencies and products are continuously updated and improved.

5. *Open and action-oriented*: Management communicates often with employees, there is considerable focus on communication and knowledge sharing, the organisation is open to change and performance-oriented.

The HPO framework is discussed in more detail below.

3.6.2.1 HPO factor 1: Management quality

Management ultimately comes down to dealing with people. Regardless of how many tools and techniques managers implement, they will not achieve anything if they cannot motivate people to use these for improving their performance. The HPO research shows that the quality of an organisation's management is the most important factor which determines whether the organisation will become and remain and HPO – therefore excellent managers are the foundation of the HPO (De Waal, 2012).

In terms of management quality, De Waal (2012) highlighted the following factors: trust, integrity, a strong role model, fast decisions, fast actions, coaching, results orientation, effectiveness, strong leadership, confidence, accountability, and decisiveness toward non-performers. Even though 12 characteristics seem to be a lot for HPO managers to satisfy, many of these characteristics are often already present. As a result of attitude towards working life, HPO managers strive to be trusted and have integrity, they are decisive, action oriented, effective, responsible and results oriented. They are often confident by nature. Difficulties are experienced with coaching, inspiring, being a role model, and holding people accountable as not much emphasis is placed on these characteristics early in their careers. The following characteristics can also be difficult to acquire for managers as a result of lack of good role models when they were still employees, namely communication, holding dialogues, daring to make and forgive mistakes and welcoming change (De Waal, 2012).

It is interesting to note that a specific management style used by successful managers is not indicated by the HPO characteristics. Therefore, there is, in practice, not one specific management style for achieving high performance rather, HPO managers use various management styles depending on the organisation's situation at a certain time – this is referred to as situational leadership (De Waal, 2012).

3.6.2.2 HPO factor 2: Openness and action orientation

In an HPO, people have an incurable curiosity about how the organisation, its processes and its people can be improved. They therefore spend time on dialoguing, sharing knowledge and learning – this is a major reason why it is fun to work. Their aim is to develop themselves and the organisation (De Waal, 2012).

In terms of openness and action orientation, De Waal (2012) highlighted the following factors: dialogue, knowledge sharing, employee involvement, allowing mistakes, welcoming change, and performance drive-ness.

3.6.2.3 HPO factor 3: Long-term orientation

The long-term continuity of the organisation is more important to the HPO than achieving short-term profit. As a result, the limited focus on shareholder value is less important than stakeholder management. Customers is one of the most important stakeholders and servicing them as best as possible is seen as the reason for being of the organisation (De Waal, 2012).

In terms of long-term orientation, De Waal (2012) highlighted the following factors: stakeholder orientation, customer orientation, longevity, promotion from within, and a secure workplace.

3.6.2.4 HPO factor 4: Continuous improvement and renewal

HPOs are distinguished from non-HPOs by their strong focus on continuous improvement. In an HPO, employees always strive to be better because they want to, not because they have to and in order to get the best out of themselves and their colleagues for the stakeholders (De Waal, 2012).

In terms of continuous improvement and renewal, De Waal (2012) highlights the following factors: a unique strategy, process improvement, process simplification and process alignment, performance management, as well as innovation of products, services, processes, and innovation of core competencies.

3.6.2.5 HPO factor 5: Employee quality

A precondition for becoming an HPO is to hire and retain employees that have an incurable curiosity, want to be challenged, need to have responsibility and accountability and always want to perform better. By performing better than the average employee, high performance employees contribute more to the effectiveness of the organisation (De Waal, 2012).

In terms of employee quality, De Waal (2012) highlighted the following factors: inspiration, resilience and flexibility, a diverse and complementary workforce as well as partnership.

De Waal's (2012) framework was discussed in detail in this section. Compared to the other frameworks discussed in Chapter 2, this HPO framework is detailed and thorough, considering many aspects that lead to high performance. It is also easily applicable by any organisation, delivering any type of service and/or product. In the next section, the HPO framework of the IT organisation in this study will be integrated with De Waal's (2012) HPO framework.

3.7 INTEGRATION OF THEORETICAL HPO MODELS

For the purposes of this research dissertation, the researcher defines high performance organisation as (De Waal, 2012, p. 37): *"A high-performance organisation is one that achieves financial and non-financial results that are exceedingly better than those of its peer group, over a period of five years or more, by focusing in a disciplined way on what really matters to the organisation."*

The literature review discussed (Chapter 2) and evaluated (Chapter 3) as well as the IT organisation's HPO framework, provide a basis for developing a theoretical HPO model. The theoretical HPO model depicted below was developed by the researcher to outline the key constructs necessary to achieve high performance. The theoretical framework provides the foundation of the constructs imperative to high performance.

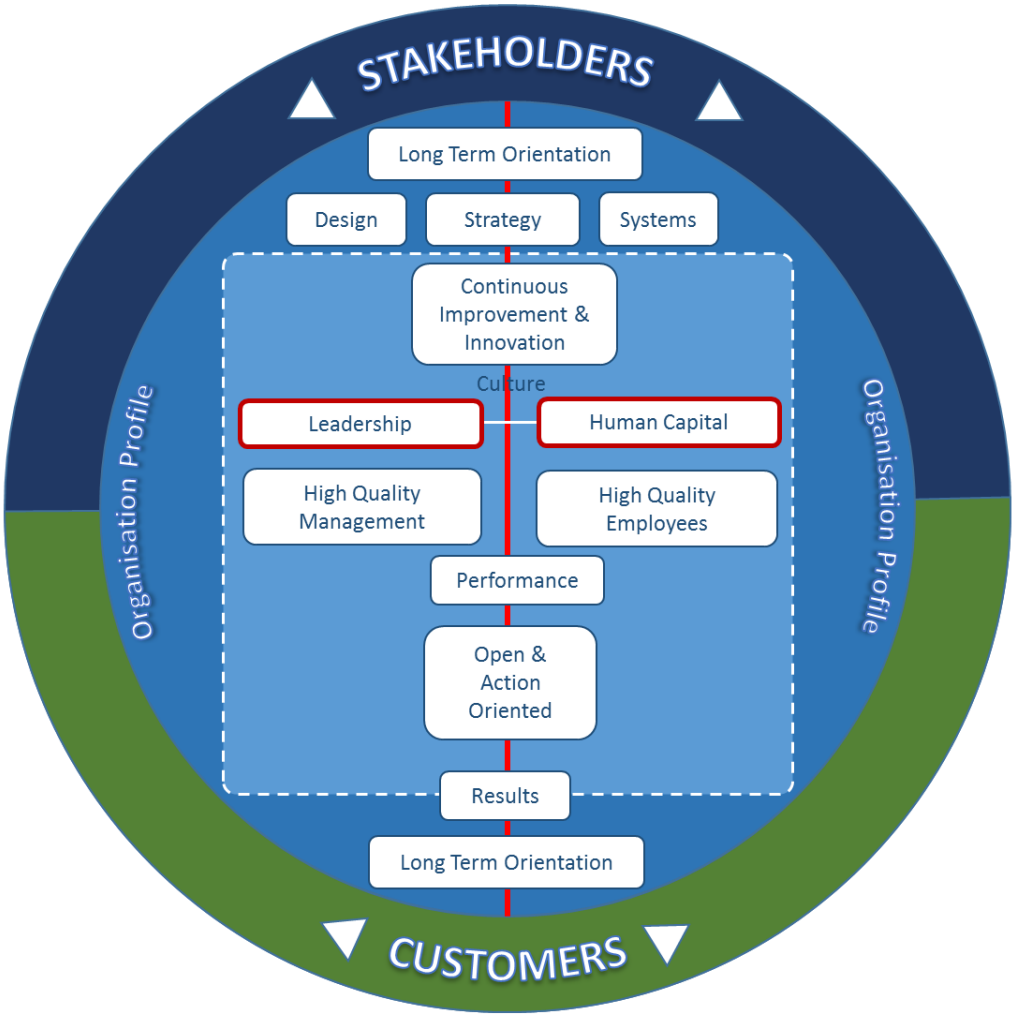


Figure 3.5. Proposed theoretical HPO model (Researcher)

Although the definitions for the HPO constructs differ, there are similarities at face value. Table 3.5 illustrates these similarities, that is *High-quality management* (De Waal, 2012) is similar to *leadership* and *culture* (IT Organisation HPO model constructs).

Table 3.5

Possible similarities (at face value) between the IT organisation's HPO constructs and De Waal's (2012) HPO model constructs

IT Organisation's HPO Model Constructs	De Waal's (2012) HPO Model Constructs
Leadership: **The transformational** leadership style **adopted and evident throughout all levels in the company to set clear direction on how to achieve the organisation's strategic intent.**	*High-quality management*: Managers of excellent organisations are honest, decisive, action-oriented, performance-oriented, effective, self-confident and have a strong leadership style. The emphasis lies on a strong relationship of trust with employees and on coaching and facilitating. Employees and managers hold each other responsible and the managers are decisive with it comes to 'non-performers'.
Culture: **The** values**,** behaviour, beliefs, norms, and standards practiced **by all in pursuit of the organisation becoming an HPO.**	De Waal (2012) does not refer to *culture* as such, however he does refer to *high-quality management and high-quality employee* behaviours which must be encouraged to achieve high performance these behaviours can imply what type of culture needs to be built within an HPO. The HPO factor *open and action-oriented* may also infer an HPO culture at face value, that is: Management communicates often with employees, there is considerable focus on communication and knowledge sharing, the organisation is open to change and performance-oriented.
Human Capital: **The organisation's** employees **are managed to drive the sum of the organisational capabilities for value creation and to** attract**,** retain and manage **high-performance talent which supports the organisation's strategic intent.**	*High-quality employees*: Employees assume responsibility and want to be held responsible, the *total staff is diverse and complementary, employees are trained at increasing flexibility and resilience and want to be challenged to excel*.
Organisation Profile: **The organisation's responses to those** environmental factors **that have financial, operational, relational and reputational challenges or impacts.**	De Waal's (2012) HPO model does not refer to an *Organisational Profile* as such, however the HPO factor *continuous improvement and innovation* may have some relevance (at face value), that is: The organisation has a distinctive strategy, processes are continuously improved, simplified and coordinated, the more relevant and correct information is reported, and the *core competencies and products are continuously updated and improved.*
Stakeholders: **Understanding and responding to the** stakeholder needs**, wants, and** expectations **dictates the organisation's high performance from its perspective. The organisation engages stakeholders appropriately through strong partnerships and alignment to adhere to the mandate of the Act that governs the organisation.**	*Long-term orientation*: Continuity in the long term always comes before short-term profit, orientation towards *collaboration with other organisations, orientation towards good long-term relationships with all stakeholders*, orientation towards customer interest; managers are committed in the long term to the organisation and therefore often promoted from within.
Customers: **Characterises the** engagement strategies **with organisation's customers that is based on strong** partnership **to demonstrate that the organisation understand the**	*Long-term orientation*: Continuity in the long term always comes before short-term profit, orientation towards *collaboration with other organisations*, orientation towards good long-term relationships with all stakeholders, *orientation towards customer interest*; managers are committed in the long

IT Organisation's HPO Model Constructs	De Waal's (2012) HPO Model Constructs
customers' wants, needs, and expectations, both now and in the future.	term to the organisation and therefore often promoted from within.
Strategy: **The** strategic choices **made which is formulated in a manner that articulates the organisation's** responsiveness **to both internal and external factors to enable us to maintain competitiveness and relevance in the business space.**	*Continuous improvement and innovation*: The organisation has a distinctive strategy, processes are continuously improved, simplified and coordinated, the more relevant and correct information is reported, and the core competencies and products are continuously updated and improved.
Design**: The organisational architecture that is informed by in-depth knowledge of customers', their needs, wants and expectations. The design is customer-focused and team-oriented to drive collaboration across organisation boundaries to effectively deliver our products and services.**	De Waal's (2012) HPO model does not refer to *design* as such, however the HPO factor *continuous improvement and innovation* may have some relevance (at face value), that is: The organisation has a distinctive strategy, *processes are continuously improved, simplified and coordinated, the more relevant and correct information is reported, and the core competencies and products are continuously updated and improved.*
Systems**: The technology systems that are used daily by management and employees that are geared to the value-creation processes to manage different categories of customers.**	De Waal's (2012) HPO model does not refer to *systems* as such, however the HPO factor *continuous improvement and innovation* may have some relevance (at face value), that is: The organisation has a distinctive strategy, *processes are continuously improved, simplified and coordinated, the more relevant and correct information is reported, and the core competencies and products are continuously updated and improved.*
Performance**: The process that creates a clear link between organisational strategy and individual jobs which enables organisation integration and the realisation of strategic outcomes.**	*Open and action-oriented*: Management communicates often with employees, there is considerable focus on communication and knowledge sharing, the organisation is open to change and *performance-oriented*.
Results**: Are the strategic outcomes that the organisation achieves to satisfy its stakeholder requirements. This may include process outcomes, customer outcomes, benchmark outcomes, improvement outcomes and financial outcomes and is characterised by continuous improvement.**	De Waal's (2012) HPO model does not refer to *Results* as such, however the HPO factor *Continuous improvement and innovation* may have some relevance (at face value), that is.: The organisation has a distinctive strategy, processes are continuously improved, simplified and coordinated, the more relevant and correct information is reported, and the core competencies and products are *continuously updated and improved.* *Open and action-oriented* may also have some relevance at face value, that is: The organisation is *performance driven*. Some relevance is found in the HPO factor relating to *High-quality management*: Managers of excellent organisations are action-oriented, performance-oriented, effective, self-confident and have a strong leadership style. *High-quality employees* may also apply to some extent at face value, that is: Employees assume responsibility and want to be held responsible. Management inspires organisational members to accomplish extraordinary results.

Table 3.5 highlights the possible similarities between the participating organisation's and De Waal's (2012) HPO constructs. De Waal's (2012) model does not specifically refer to

culture, organisational profile, design, systems, or results. However, it could be implied within the various HPO factors at face value. There does however seem to exist possible similarities at face value in the following HPO factors, that is leadership, human capital, stakeholders, customers, strategy, and performance.

It is important to note that in Chapter 5 the IT organisation's HPO model is validated through qualitative analysis, however, for the purposes of this study, the researcher did not re-validate De Waal's (2012) HPO model. The researcher's focus was rather on validating the participating organisation's HPO model.

3.8 CHAPTER SUMMARY

This chapter discussed the differences between public and private sector organisations as a background to the organisation used in this study. Secondly, the chapter discussed the relevant HPO model for high performance of a South African IT organisation. The different HPO frameworks and models found in the literature study (Chapter 2) were then listed and evaluated according to certain criteria, to arrive at the HPO framework and/or model which adhered to all criteria. Finally, a theoretical high performance model was proposed.

The next chapter, Chapter 4, discusses the research methodology.

CHAPTER 4: RESEARCH DESIGN AND METHODOLOGY

"Methodology should not be a fixed track to a fixed destination but a conversation about everything that could be made of happen." – J.C. Jones

4.1 INTRODUCTION

This chapter focuses on the research design used in the study. It starts by explaining the phased approach utilised, Phase 1 discussing the literature review and Phase 2 discussing the empirical study. Phase 1 is divided into Stage 1 exploring the literature review of HPOs and Stage 2, designing a proposed theoretical HPO model. Phase 2, the empirical study, is broken into stages three to five discussing administration of the questionnaire, data analysis and finally, refinement of the proposed HPO model.

4.2 THE RESEARCH DESIGN

The plan, structure and steps that were followed to answer the research questions, is referred to as the research design (Babbie, 2010; Creswell, 2009; Kerlinger, 1986). Babbie and Mouton (2001, p. 74) described the research design as "a plan or blueprint of how you intend conducting the research". It consists of the research approach and the research method. Figure 4.1 sets out the research design that this study followed.

The research design consisted of the following two phases:

- Phase 1: Literature review.
- Phase 2: Empirical study.

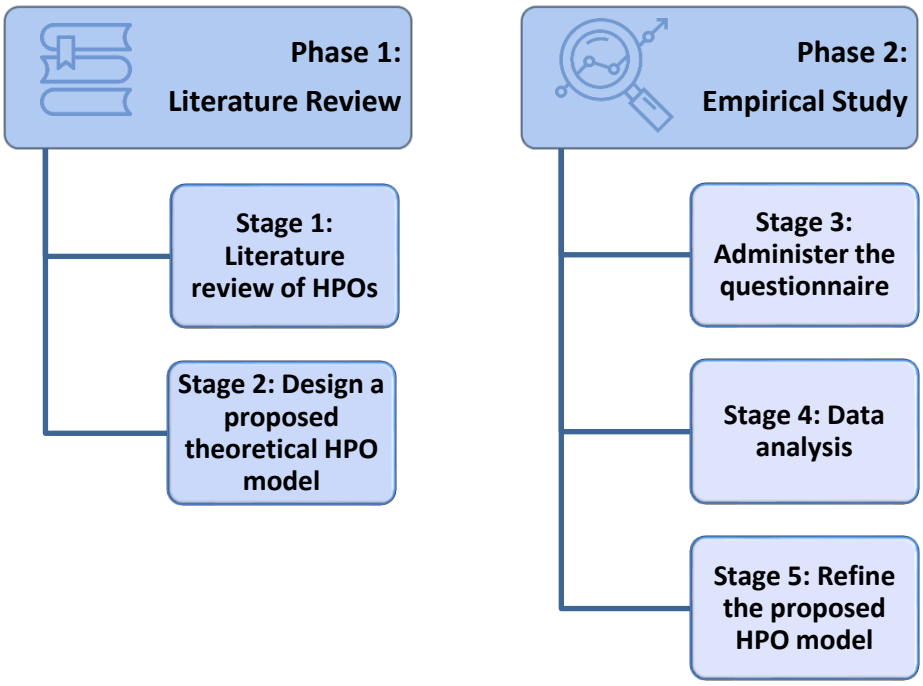


Figure 4.1. The research design (Adapted from Sabbagha, 2018)

4.2.1 Phase 1: Literature review

According to Babbie and Mouton (2001) a literature review is about presenting previous research in the area, illustrating general agreements and disagreements among previous researchers.

4.2.1.1 Stage 1: Literature review of HPOs

A literature review was conducted in which high performance frameworks and models were explored and discussed (see Chapters 2 and 3). This included high performance in both the public and private sector. Boote and Beile (2005) summarised a literature review by indicating that it shows where the research fits into the existing body of knowledge and illustrated how the subject has been studied previously.

4.2.1.2 Stage 2: Design a proposed theoretical HPO Model

Following the existing literature was evaluated according to certain criteria to arrive at a conceptual high performance model. This step was covered in detail in Chapter 3 Table 3.3: Evaluation of various theoretical HPO Frameworks.

4.2.2 Phase 2: Empirical study

An empirical approach was found to be appropriate for this study as it assisted in linking generated data to theoretical constructs to answer the research question. An empirical approach also enabled the research hypotheses to be accepted or rejected.

In the empirical research process, data was gathered from the IT organisation by means of an HPO questionnaire. The questionnaire was administered three times over six years, that is 2012, 2014, and 2016. The data obtained was then statistically analysed by using EFA and CFA to determine possible relationships between the constructs and to validate the theoretical HPO model (Hair et al., 2010). The HPO models stemming from the respective years (i.e. 2012, 2014, and 2016) were also compared with one another. Finally, recommendations were made to propose a new HPO Model.

4.2.2.1 Stage 3: Administer the questionnaire

This stage included the following steps:

Step 1: Population and sample.

Step 2: Characteristics of the sample.

Step 3: Developing the questionnaire.

Step 4: Data gathering.

Step 5: Data capturing and processing.

Step 6: Ethical considerations.

(a) Step 1: Population and sample

In this study the researcher made use of convenience sampling, a non-probability sampling method. Non-probability sampling relies on judgemental and/or convenience for sample selection. Convenience sampling relies on data collection from population members who are conveniently available to participate in the study (Babbie, 2010; Dudovskiy, 2018; Moshoeu, 2017). All employees of the relevant organisation were invited to complete the questionnaire and the responses of the ones who did complete were used for data analysis.

The organisation in which this study was conducted is a SOE. An SOE is a legal entity with the government being both the supervisory body and a stakeholder (PWC, 2015). The organisation consists of 14 departments and approximately 3,200 employees functioning within various job levels. The job levels are as follows:

- Administration.
- Specialist.
- Consultant.
- Lead Consultant.
- Senior Manager.
- Head of Department.
- Executive.

This specific sampling method was chosen as all employees were invited to voluntarily complete the questionnaire instrument (see Annexure 1). A total of 3,451 responses were received, over the six year period. This is illustrated Table 4.1:

Table 4.1

Questionnaire responses received in the six-year period

Year of study	Total population	Sample size	Response rate
2012	±3 154	n = 1 145	36%
2014	±3 135	n = 746	24%
2016	±3 350	n = 1560	47%

The characteristics of each sample are described below according to the following biographical variables: Years of service, generation born into, race, gender, and job level. These variables play an important role to assist in explaining the variations in the data through the assessment of group differences.

(b) Step 2: Characteristics of the sample

The sample distribution disaggregated by demographic attributes is presented in the sections below.

(i) Gender

The gender differentiations for the different years and relevant samples are reported in Table 4.2:

Table 4.2

Gender differentiation for the respective years and relevant samples

	2012		2014		2016	
Gender	*n*	%	*n*	%	*n*	%
Male	616	53.8	401	53.8	770	49.4
Female	526	45.9	339	45.4	786	50.4
No responses	3	0.3	6	0.8	4	0.2
Total	1145	100.0	746	100.0	1560	100.0

In 2012, of the 1,145 questionnaire respondents in this iteration, 616 (53.9%) were male and 526 (45.9%) females, while there were three empty questionnaires (0.3%) which were submitted. This demonstrates a balanced, proportional gender distribution and reflects the population characteristics. Of the 746 respondents in the 2014 questionnaire iteration, 401 (53.8%) were male, 339 (45.4%) females and six empty questionnaires (0.8%) were submitted. This again demonstrates a balanced, proportional gender distribution and reflects the population characteristics. The 2016 iteration of the questionnaire showed that, of the 1,560 questionnaire respondents, 770 (49.4%) were male, 786 (50.4%) females and four empty questionnaires (0.2%). This demonstrates a balanced, proportional gender distribution. It also reflects the population characteristics.

(ii) Race

The race differentiation of the various samples is reported in Table 4.3:

Table 4.3

Race differentiations for the respective years and relevant samples

	2012		2014		2016	
Race	*n*	%	*n*	%	*n*	%
African	518	45.2	367	49.2	897	57.5
Coloured	85	7.4	46	6.2	86	5.5
Indian	49	4.3	38	5.1	56	3.6
White	493	43.1	295	39.5	519	33.3
No responses	0	0	0	0	2	0.1
Total	**1,145**	**100.0**	**746**	**100.0**	**1,560**	**100.0**

In 2012, of the 1,145 questionnaire respondents in this iteration, 518 (45.2%) were African, 85 (7.4%) Coloured, 49 (4.3%) Indian and 493 (43.1%) White. This demonstrates a representative race distribution relative to the organisational breakdowns in terms of race. Of the 746 questionnaire respondents in the 2014 questionnaire iteration, 367 (49.2%) were African, 46 (6.2%) Coloured, 38 (5.1%) Indian and 295 (39.5%) White. This also demonstrates a representative race distribution relative to the organisational breakdowns in terms of race. The 2016 iteration of the questionnaire showed that, of the 1,560 questionnaire respondents, 897 (57.4%) were African, 86 (5.5%) Coloured, 56 (3.6%) Indian and 519 (33.3%) White. The race breakdown in the respective years of the questionnaire demonstrates a representative race distribution relative to the organisational breakdowns. There were two questionnaires that contained no responses for race. The reason for not indicting one's race could indicate a concern of being identified.

(iii) Generation

The generation distribution of the various samples is presented in Table 4.4:

Table 4.4

Generational differentiations for the respective years and relevant samples

	2012		2014		2016	
Generation	*n*	%	*n*	%	*n*	%
Born between 1978 and 2000	259	22.7	185	24.9	595	38.3
Born between 1965 and 1977	539	47.2	328	44.1	627	40.3
Born between 1946 and 1964	344	30.1	230	31.0	333	21.4
No responses	3	0.3	6	0.8	4	0.2
Total	**1,145**	**100.0**	**746**	**100.0**	**1,560**	**100.0**

In 2012, of the 1,145 questionnaire respondents in this iteration, 259 (22.7%) were born between 1978 and 2000, 539 (47.2%) were born between 1965 and 1977, while 344 (30.1%) were born between 1946 and 1964. Three of the responses were empty. This shows a balanced generational distribution. Of the 746 questionnaire respondents in the 2014 questionnaire iteration, 185 (24.9%) were born between 1978 and 2000, 328 (44.1%) were born between 1965 and 1977, while 230 (31.0%) were born between 1946 and 1964. Six of the responses were empty - a balanced generational distribution is illustrated. The 2016 iteration of the questionnaire showed that, of the 1,560 questionnaire respondents, 595 (38.3%) were born between 1978 and 2000, 627 (40.3%) were born between 1965 and 1977, while 333 (21.4%) were born between 1946 and 1964. This shows a balanced generational distribution. Four of the responses were empty. The reason for not indicting one's age could indicate a concern of being identified.

(iv) Years of service

The years of service distributions of the various samples is reported in Table 4.5:

Table 4.5

Years of service differentiations for the respective years and relevant samples

	2012		2014		2016	
Years of Service	*n*	%	*n*	%	*n*	%
0 to 2 years	85	7.4	57	7.6	332	21.3
3 to 5 years	285	24.9	119	15.9	140	9
6 to 10 years	254	22.2	184	24.7	426	27.3
11 to 20 years	286	25	228	30.6	379	24.3
21 to 30 years	189	16.5	120	16.1	215	13.8
31+ years	44	3.8	37	5	64	4.1
No responses	2	0.2	1	0.1	4	0.2
Total	**1,145**	**100.0**	**746**	**100.0**	**1,560**	**100.0**

In 2012, of the 1,145 questionnaire respondents in this iteration, 85 (7.4%) had been working at the organisation for 0 to 2 years, 285 (24.9%) for 3 to 5 years, 254 (22.2%) for 6 to 10 years, 286 (25%) for 11 to 20 years, 189 (16.5%) for 21 to 30 years and 44 (3.8%) for 31 plus years. Two of the responses were empty. The new employees and the employees who have been with the organisation the longest seem to have been in the minority. Of the 746 questionnaire respondents in the 2014 questionnaire iteration, 57 (7.6%) had been working at the organisation for 0 to 2 years, 119 (15.9%) for 3 to 5 years, 184 (24.7%) for 6 to 10 years, 228 (30.6%) for 11 to 20 years, 120 (16.1%) for 21 to 30 years and 37 (5%) for 31 plus years. One of the responses was empty. This again shows that the new employees and the employees who have been with the organisation the longest seem to have been in the minority. The 2016 iteration of the questionnaire showed that, of the 1,560 questionnaire respondents, 332 (21.3%) had been working at the organisation for 0 to 2 years, 140 (9%) for 3 to 5 years, 426 (27.3%) for 6 to 10 years, 379 (24.3%) for 11 to 20 years, 215 (13.8%) for 21 to 30 years and 64 (4.1%) for 31 plus years. In this iteration, only the employees who have been with the organisation the longest seem to have been in the minority. Four of the responses were empty. The reason for not indicting one's tenure could indicate a concern of being identified.

(v) Job level

The job level distributions of the various samples are presented in Table 4.6:

Table 4.6

Job level differentiations for the respective years and relevant samples

	2012		2014		2016	
Job level (Paterson)	*n*	%	*n*	%	*n*	%
A1-A3	18	1.5	9	1.2	26	1.7
B1-B5	209	18.3	122	16.3	191	12.2
C1-C5	514	44.9	369	49.5	799	51.2
D1-D5	384	33.5	231	31.0	514	32.9
E1-E3	18	1.6	11	1.5	23	1.5
No responses	2	0.2	4	0.5	7	0.5
Total	**1,145**	**100.0**	**746**	**100.0**	**1,560**	**100.0**

In 2012, of the 1,145 questionnaire respondents in this iteration, 18 (1.5%) were on Paterson Grade A1 to A3, 209 (18.3%) on B1 to B5, 515 (44.9%) on C1 to C5, 385 (33.5%) on D1 to D5, while 18 (1.6%) were on E1 to E5. This indicates a balanced job level distribution. Of the 746 questionnaire respondents in the 2014 questionnaire iteration, 9 (1.2%) were on Paterson Grade A1 to A3, 122 (16.3%) on B1 to B5, 369 (49.5%) on C1 to C5, 232 (31%) on D1 to D5, while 11 (1.5%) were on E1 to E5. This indicates a balanced job level distribution. Three of the responses were empty. The 2016 iteration of the questionnaire showed that, of the 1560 questionnaire respondents, 26 (1.7%) were on Paterson Grade A1 to A3, 190 (12.2%) on B1 to B5, 798 (51.2%) on C1 to C5, 513 (32.9%) on D1 to D5, while 23 (1.5%) were on E1 to E5. This indicates a balanced job level distribution. Ten of the responses were empty. The reason for not indicting one's job level could indicate a concern of being identified.

The measuring instrument or questionnaire is discussed in the next section.

(c) Step 3: Develop the questionnaire

i) Questionnaire design

To measure the organisation's HPO Model and gather the required data for validity purposes, an HPO questionnaire was developed specifically for the organisation in this study. The organisation designed their own HPO framework and required a questionnaire to measure the constructs.

The project or design team should consist of a mix of members who are either experts or experienced questionnaire consultants in the subject field or in questionnaire design or construction. It is imperative that the questionnaire sponsor (often a representative from the human resources, human capital, or organisational development department) of the organisation should also be included in the team. This team should also include other members, such as an information technology expert responsible for online hosting of the questionnaire, a questionnaire software expert, communications and marketing members to advertise the questionnaire using media and questionnaire champions (Martins & Ledimo, 2017). In this study, the project team consisted of the following members (see Figure 4.2):

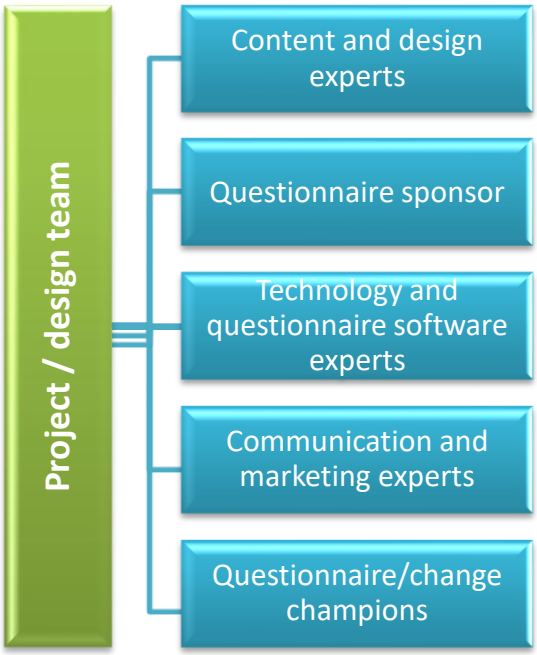


Figure 4.2. Questionnaire project / design team in the relevant organisation (Adapted from Church & Waclawski, 2001)

The researcher was part of the project/design team. Using the organisation's HPO framework, the project team utilised the following dimensions:

1. Building an HPO

   This dimension measures the extent to which performance measures are clearly defined and match the organisation's strategic objectives; team clarity on customer satisfaction goals and performance expectations; risk taking in terms of better customer service is rewarded; and internal process design meets with customer needs.

2. Change and renewal

   This dimension measures flexibility to meet required changes; the effect of the current changes on work and customer service delivery; participation in change processes; management's honesty and openness during change; and the way change is managed

in terms of explanation, training, resources, support, planning, and monitoring changes once implemented.

3. Diversity

This dimension measures the extent to which the organisation caters for the needs of disabled people; advances previously disadvantaged people; appoints the best skilled workers; and the extent to which diverse cultural perspectives are valued in teams.

4. Employer brand

The employer brand dimension measures the extent to which the organisational brand is highly rated; ethical; known to the outside world; reputable; proudly associated with from an employee perspective and awareness of what makes it different to competitors.

5. Employee engagement

Employee engagement is measured in terms of commitment; effort; motivation and willingness to please customers; produce outstanding quality of work; and the supervisor's caring and example set to motivate employees.

6. Employee satisfaction

This dimension measures the satisfaction levels of employees in terms of involvement in decision-making; salary package; career and training opportunities; challenging roles; empowerment; and use of skills and expertise.

7. Employer of choice

This dimension measures the extent to which employees are proud to work for the organisation; would recommend the organisation as a good place to work; like their work; are inspired by immediate supervisor; and the extent to which the organisation retains its best skilled employees.

8. Knowledge Management

The knowledge management dimension measures employees' behaviour in terms of sharing; creating; willingness to use and apply others' knowledge to improve problem solving. It measures the extent to which experts in the organisation are willing to share their knowledge; and whether employees have access to the organisational experts' knowledge needed to be a lead organisation. It also measures management's support of interaction between employees and external stakeholders to acquire knowledge that enables public sector service delivery and the extent to which managers create an awareness of organisational challenges.

9. Leadership

This dimension measures the extent to which supervisors are competent; listen; are knowledgeable in their area of responsibility; help employees; and lead by example. The extent of trust between employees and immediate supervisors is measured, as well as employees' belief in the current leadership to achieve the organisation's vision, and the level of trust between employees and executive leadership.

10. Culture

This dimension measures the extent to which employees are allowed to have and share their point of view; willingness to say what management really need to know;

participate in decision-making; creatively resolve issues; come up with new and better ways of doing things; use a standardised way of doing business; and use a common language and terminology across the business.

11. Vision, mission, and values

This dimension measures the extent to which employees, supervisors and leaders' behaviour is in line with the company values; the extent to which staff are inspired by the values and knows how their job roles fit into the total organisation picture and their belief in the organisation being the leading ICT SOE.

12. Work Environment

This dimension measures satisfaction with the quality of equipment; physical work set-up; availability of resources to perform work effectively; and systems and processes in support of providing good customer service.

13. CMMI Institutionalisation

The Capability Maturity Model Integration (CMMI) is a globally-recognised set of best practices that an organisation can utilise to improve performance, key capabilities, and critical business processes. CMMI defines the following maturity levels for processes: initial, managed, defined, quantitatively managed, and optimising. This dimension therefore measures CMMI knowledge and awareness.

The project team referenced various authors/researchers in designing the questionnaire. Table 4.7 depicts how many items were chosen per dimension and if the items were adapted from other authors or newly developed:

Table 4.7

Questionnaire dimensions, number of items, original authors and validation (where applicable)

HPO Dimension	Number of Items	Original Authors	Original questionnaire validated/not	Theoretical Support
Building an HPO	6	Newly developed questions	N/A	Osborne & Cowen (2002) Holbeche (2005)
Change and renewal	10	Newly developed questions	N/A	Mohrman & Cummings (1989) Pasmore (1994) Duques & Gaske (1997) Heller (1997) Butteriss (1998) Lawler et al. (1998) Foster & Kaplan (2001) Holbeche (2005) Beer (2009) Nel & Beudeker (2009) Akdemir et al. (2010) De Waal (2012)
Diversity	4	Coetzee (2009)	Yes	Butteriss (1998) Akdemir et al. (2010) De Waal (2012)
Employer Brand	7	Castro (2009)	Yes	None
Employee Engagement	7	Castro (2009)	Yes	Schaffer (1988) Mohrman & Cummings (1989) Goldsmith & Clutterbuck (1997) Lawler et al. (1998) Akdemir et al. (2010)
Employee Satisfaction	8	Coetzee (2009)	Yes	Popovich (1998) Akdemir et al. (2010) De Waal (2012)
Employer of Choice	6	Coetzee (2009)	Yes	None
Knowledge Management	11	Martins & Meyer (2012)	Yes	Mische (2001) Bagorogoza & De Waal (2010) Akdemir et al. (2010) De Waal (2012)

HPO Dimension	Number of Items	Original Authors	Original questionnaire validated/not	Theoretical Support
Leadership	8	Castro (2009)	Yes	Duques & Gaske (1997) Butteriss (1998) Lawler et al. (1998) Haeckel (1999) Collins (2001) Hammer (2001) Mische (2001) Owen et al. (2001) Joyce et al. (2003) Holbeche (2005) Beer (2009) Akdemir et al. (2010) Gupta (2011) Cocks (2012) De Waal (2012) Wolf (2015)
Culture	8	Newly developed questions	N/A	Joyce et al. (2003) Gupta (2011)
Vision, Mission and Values	6	Coetzee (2007)	Yes	Mills (1994) Butteriss (1998) Hammer (2001) Owen et al. (2001) Nel & Beudeker (2009) Akdemir et al. (2010) De Waal (2012)
Work Environment	4	Castro (2009)	Yes	None
CMMI Institutionalisation	6	Newly developed questions	N/A	None
Total	**91**			

Four of the dimensions included newly developed questions, while nine of the dimensions included questions from previously designed questionnaires and validated items. Higher levels of agreement were associated with a higher perceived level of satisfaction with all dimensions.

Martins and Ledimo (2017) discussed the advantages and disadvantages of the three options of questionnaires that the questionnaire consultant or those conducting the organisational diagnosis should consider when deciding whether to use an existing or customised questionnaire or develop a new questionnaire:

Table 4.8

Choice of questionnaire instrument for organisational diagnosis (Martins & Ledimo, 2017)

Choice of instrument	Advantages	Disadvantages
Existing validated questionnaire	• Validity already established: ensures that findings are accurate and represent the reality being measured. • Reliable in that it should produce consistent findings at different times and under different circumstances. • Saves time because the questionnaire has already been compiled and tested. • Benchmark results might be available.	• Might be expensive to buy. • Not always readily available and must be sourced or purchased from publishers/developers. • Might not meet your specific questionnaire objectives. • Might require pilot testing in your organisation to test understanding of questionnaire. • Might need to confirm validity and reliability in a different environment.
Customised questionnaire	• Allows for flexibility in terms of measuring additional dimensions or statements. • Saves time as opposed to new design/development.	• Additional dimensions added to the validity questionnaire must be analysed separately. • Changing questions in repeat questionnaires complicates comparison of data with previous questionnaire(s). • Might require pilot testing in our organisation to test understanding of questionnaire. • Might need to confirm the validity and reliability in a different environment.
New questionnaire	• Directly suited to organisation's needs. • Creates an opportunity to engage with executives and senior management, which in turn obtains their commitment to the questionnaire. • Using questions from available question libraries saves time.	• Time consuming and costly to develop. • Requires specific knowledge and expertise on the topic to be explored and on questionnaire design. • Requires pilot testing. • Requires validation. • No benchmark results may be available.

The questionnaire for this study was designed by the project team and the next step entailed administration of the questionnaire. From Table 4.8, a mixed approach was used namely existed validated items and newly developed items were selected.

After drafting the questionnaire, it was presented to the project team (Figure 4.1) to pre-test the questionnaire. The questionnaire was reviewed by the project team in terms of its

suitability to measure the HPO model, the content of the items, the terminology used in the questionnaire and its face validity. After inputs by the project team the questionnaire was also presented to the organisational executive committee for their input and approval. The purpose was to determine if the instrument measures the constructs as presented in the organisations HPO model and to test for construct validity. After the inputs of the project team and executive committee, a final draft of the questionnaire was programmed in the questionnaire software programme (SurveyTracker software package (https://www.surveytracker.com). The questionnaire was then distributed electronically to the project team as well as a representative sample of employees to determine the content and face validity of the questionnaire. The pilot group had the opportunity to comment on aspects such as (Martins & Ledimo, 2017):

- Are the instructions clear?
- Which, if any, questions were unclear or ambiguous?
- Were any HPO constructs omitted?
- Was the layout of the questionnaire clear and attractive?
- Will co-workers have trouble to complete the questionnaire?

Some of the feedback related to the following:

- Not all employees would be able to complete the electronic questionnaire. Paper questionnaires and trained facilitators needed to be used for some levels of employees.
- Some aspects and terms in the questionnaire needed to be explained in the questionnaire such as customer, division, brand, and senior leadership (See Annexure 1).
- The organisations vision, mission, and values need to be explained.
- Aspects such as victimisation and honesty also needed to be explained.
- Unclear constructs and items were rephrased.

The questionnaire was then finalised and approved by the executive committee.

ii) Questionnaire administration

The questionnaire is one of self-evaluation and was administered electronically via the Internet or by providing pen-and-paper (hard copy) questionnaires to individuals who preferred to do so. It took approximately 20 minutes to complete the questionnaire, although there was no set time limit. The questionnaire consisted of two sections, namely biographical information, and questionnaire statements.

- Biographical information

  At the start of the questionnaire, information was gathered on eight biographical variables, namely years of service, generation born into, race, gender, job level, disability status, and division/department.

- Questionnaire statements

  A total of 91 statements/questions were designed to assess the 13 dimensions as set out in Table 4.7. Examples of some of the statements/questions are illustrated below:

  - *"My immediate supervisor inspires the people in my team."*
  - *"We retain our best skilled employees."*
  - *"I feel committed to the organisation."*
  - *"In my team diverse culture perspectives are valued."*

- *"I believe the current leadership has what it takes to achieve the organisation's vision"*
- *"I have the resources I need to perform my job effectively."*

The statements were rated according to a Likert scale, discussed below.

- The HPO Questionnaire scale

A 5-point Likert- type scale (Likert, 1932) was used with the following descriptions:

Table 4.9

Likert-type scale (Adapted from Likert, 1932)

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
1	2	3	4	5

The Likert-type scale consists of multiple items that typically are summed or averaged to produce a more reliable measure than could be obtained by using a single item. Distinguishing characteristics of the Likert scale are as follows (Brill, 2008):

- Each item uses a set of symmetrically balanced bipolar response categories indicating varying levels of agreement or disagreement with a specific stimulus statement expressing an attitude or opinion (e.g. *ripe cherries are delicious*).
- The response category points for each item is individually labelled (e.g. *strongly disagree, disagree, unsure, agree, and strongly agree*).
- The descriptive text of labels is chosen so that gradations between each pair of consecutive points seem similar.

In application of the Likert-type scale in this study, the 13 dimensions are measured separately and reflect the respondents' evaluation of each dimension. A separate score can be produced for each of the 13 dimensions and all the dimensions can be added to provide a total score (Ledimo, 2012).

(d) Step 4: Data gathering

Employees were given a choice to complete the questionnaire either online (electronically) or by hand (pen-and-paper):

i) Electronic option

All employees in the organisation were invited to take part in the questionnaire via a communication e-mail with a link to the questionnaire. The e-mail included a message from the relevant executive explaining the purpose of the questionnaire, confidentiality, and anonymity, what the results would be used for, what will be done with the responses and the content of the questionnaire. The names of the change manager and change agents were provided for support and assistance.

ii) Pen-and-paper option

It was the responsibility of the managers of employees who did not have access to computers to inform their subordinates about the questionnaire and to arrange for them to complete the questionnaires by hand. The employees were gathered in a boardroom and each was given a copy of the questionnaire. The instructions included a message from the relevant executive explaining the purpose of the questionnaire, confidentiality, and anonymity, what the results would be used for, what will be done with the responses and the content of the questionnaire. The names of the change manager and change agents were provided for support and assistance.

Registered industrial psychologists from the University of South African (UNISA) were trained and utilised as facilitators who assisted the respondents in their respective native languages. Where questionnaire questions seemed unclear, the facilitators clarified understanding by explaining the questions to the respondents in their home language. The completed questionnaires were collected by the facilitators and handed to the change managers for data capturing.

Completing questionnaires online gives the researcher the advantage of reaching a large sample of the population and therefore increasing the generalisability of the research. This method is relatively fast, inexpensive, and flexible, which enables a high control of the sample and its availability to directly load data into the analysis software. It also protects respondents' privacy and confidentiality (Moshoeu, 2017; Blumberg, Cooper, & Schindler, 2005).

A major concern with online questionnaires is the possibility of the low response rates (Blumberg et al., 2005) and limited Internet connectivity (Neuman, 2011). The risk of limited Internet access was eliminated by providing the option to complete the questionnaire by hand. Those employees who did not have access to computers (e.g. cleaners) were also given hard copies of the questionnaire to complete by hand. Paper-and-pencil questionnaires are more economical and efficient; Evans and Mathur (2005) highlight the benefits thereof:

- Personal interaction.
- Clear instructions.
- Question variety.
- Flexibility and adaptability.
- Ability to use physical stimuli.
- Capability to observe respondents.
- Control over the environment.

The following steps were taken to ensure confidentiality where questionnaires were completed by hand:

- All facilitators were trained in maintaining confidentiality and supervising employees. Facilitators included employees from the relevant organisation in conjunction with registered Industrial Psychologists from UNISA.
- Employees remained anonymous.
- The completed questionnaires were immediately handed to the change manager in charge of the project.

This process allowed the researcher to obtain self-generated data that was used to test the validity of the HPO model. Similar questionnaire administration activities were applied in each questionnaire period (2012, 2014, and 2016) to ensure the consistency and validity of the questionnaire processes.

(e) Step 5: Data capturing and processing

After completion, the results of the pen-and-paper questionnaires were captured in MS Excel and manually imported into an electronic spreadsheet format. A web-based server was used to store the data captured from the online questionnaire responses by using the SurveyTracker Software Package (https://www.surveytracker.com). In both instances only fully completed questionnaires were utilised for data cleaning and processing purposes (see 4.2.2.2 below).

The data was then reviewed and prepared for analysis; data entry and transcription were rechecked and confirmed. The raw database was entered into the Statistical Package for Social Sciences (IBM SPSS [2017] version 24) computer software. Data was checked for missing values. Missing data were coded or identified and listwise deletion used to remove

the missing data. The data was then analysed by means of the IBM SPSS (version 24) to execute statistical and quantitative procedures.

(f) Step 6: Ethical considerations

Wassenaar (2006) maintained that ethics should be a fundamental concern throughout the planning, designing, implementing, and reporting of research findings involving humans. The research process should therefore not harm respondents physically or emotionally and their privacy, dignity, and well-being should always be considered (Cooper & Schindler, 2014).

Considering this, the following steps were taken to ensure adherence to ethical research practices:

- The Department of Industrial and Organisational Psychology (IOP) and the University Ethics Committee were consulted to seek ethical clearance and permission to conduct the research. Ethical clearance and permission were granted.
- Permission was requested from the relevant authorities within the organisation to conduct the study. Permission was granted.
- The questionnaire was sent out via e-mail or was administered on a pen-and-paper basis and included a letter from the relevant executive explaining the purpose of the questionnaire, confidentiality and anonymity, what the results would be used for, what will be done with the responses, and the content of the questionnaire. Participation was voluntary therefore employees could freely choose whether they wanted to participate or not.

In the next stage, the data was analysed.

4.2.2.2 Stage 4: Data analysis

The data gathered were analysed using the IBM SPSS (2017), version 24, including the AMOS (Analysis of Moment Structures) module, version 24. Social scientists make use of this comprehensive set of programmes which provides a wide range of statistical options (Durrheim, 2006).

The data analysis consisted of four main steps each with a set of applicable sub-steps:

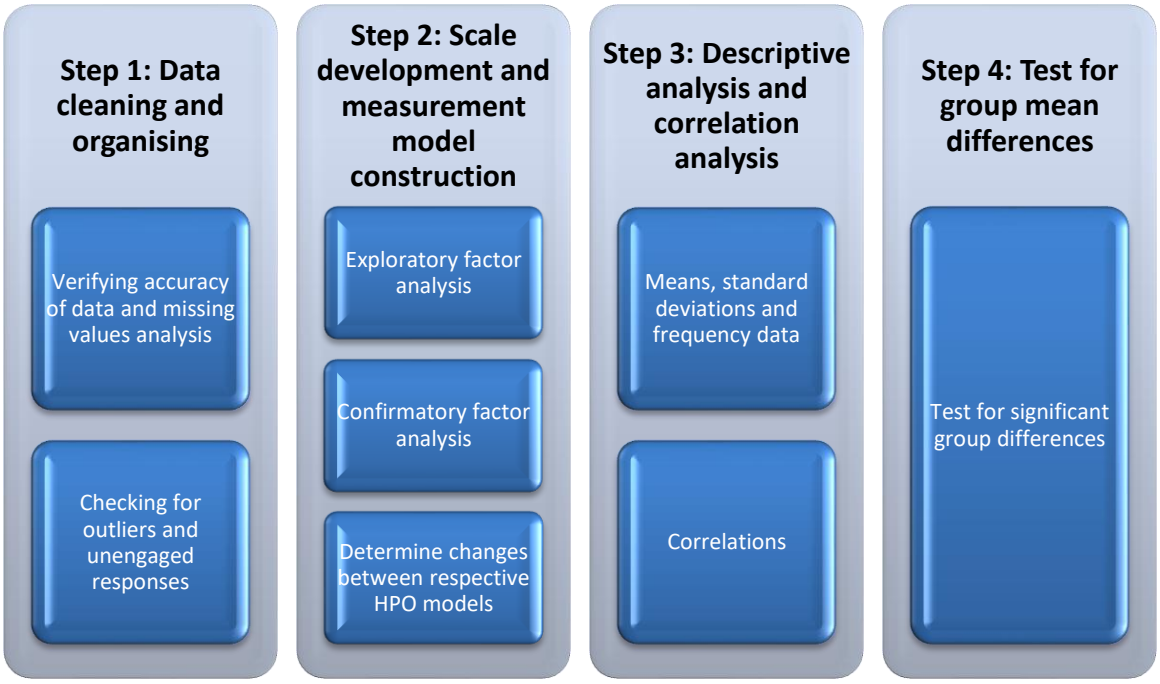


Figure 4.3. Data analysis process (Adapted from Sabbagha, 2018)

(a) Step 1: Cleaning and organising the data for analysis

❖ *Verifying accuracy of data and missing values analysis*

Newman (2009) described the term "missing data" as a statistical challenge characterised by an incomplete data matrix which occurs when one or more individuals in a sampling frame do not respond to one or more questionnaire items. Most missing data is the result

of nonresponse either due to a participant's intention not to complete the question, misunderstanding the question, or an unintentional act. It is important that the researcher verifies the accuracy of the data before engaging in statistical analysis. Therefore, thorough scrutiny of the data is required to check for missing values and foreign elements in the dataset. Missing data is one of the most pervasive challenges in data analysis because these data can distort the real essence of the information collected and therefore render the generalisability of the results impossible (Tabachnick & Fidell, 2007). Missing data or low response rate can lead to low external validity, which implies that the results obtained from a sub sample of individuals who completed the questionnaire may not reflect the same as results obtained from a 100% response rate (Newman, 2009).

There are three possible methods to deal with missing data, that is (Pallant, 2011; Newman, 2009):

- *Listwise deletion* – only fully completed questionnaires are used for data analysis, that is full data on all the variables. This may limit the sample size and lead to loss of statistical power.
- *Pairwise deletion* – excludes the questionnaires only if they are missing the data for the specific analysis but included in any of the analysis for which they have the necessary information.
- *Mean substitution (replace with mean)* - the mean value of the variable is inserted in place of the missing values. This method does not consider individual differences when estimating missing data and it may distort the results of the analysis, particularly if there are many missing values.

In this study, the method used was the listwise deletion, therefore all unsatisfactory and incomplete questionnaires were deleted from the analysis.

❖ *Checking for outliers and unengaged responses*

Hair et al. (2014) defined outliers as observations which are substantially different from other observations (has an extreme value) on one or more characteristics or variables. Pallant (2011) defined outliers as cases with values well above or well below the majority of other cases. Outliers can occur as a result of observation errors, data entry errors, instrument error based on layout or instructions or actual extreme values from self-report data (Hair et al., 2010). Outliers should be removed from the mean standard deviation and correlation coefficient values as they have the tendency to distort the statistical analysis by overly influencing the results (Hair et al., 2014; Mertler & Vannatta, 2005).

The data was also scrutinised for unresponsive cases, that is cases identified that showed no variation across the items in a particular scale, that is with a standard deviation equal to 0.3. These cases were excluded from further analysis.

(b) Step 2: Scale development and measurement model construction

Tredoux, Pretorius, and Steel (2006) defined factor analysis as a statistical technique that is used to identify a relatively small number of factors to represent the relationship among sets of interrelated variables. Factor analysis is a ‘data reduction’ technique which takes a large set of variables and finds a way in which the data may be ‘reduced’ or summarised using a smaller set of factors or components (Pallant, 2011).

Factor analysis was used in this study to examine the data or results obtained from the questionnaire instrument. In doing this, interrelationships among the items could be determined and clusters of items that share sufficient variation to justify their existence as a factor or construct, could be identified (Pallant, 2011).

The following factor analysis techniques were used in this study:

- *Exploratory factor analysis (EFA)*, where factors are estimated using a mathematical model and only the shared variance is analysed (Pallant, 2011).
- *Confirmatory factor analysis (CFA)*, the main type of calculation used in structural equation modelling, can be defined as a multivariate technique used to test (confirm) a pre-specified relationship specification (Hair et al., 2010).

❖ *Exploratory factor analysis (EFA)*

Costello and Osborne (2005) explained that EFA is about gathering information and exploring the interrelationships between a set of variables. There are two methods involved in EFA, namely extraction and rotation. In the former, where factors for factor analysis are computed, one can use a variety of methods, including, principal component analysis (PCA), principal axis factoring (PAF), maximum likelihood (ML) alpha factoring and canonical. Various rotation methods can also be utilised, namely, varimax and quartimax (orthogonal rotation) and oblimin and promax (oblique rotation).

For the purposes of this study, principal factor analysis together with varimax and promax were conducted in order to determine the factor structure of all the relevant latent variables, as well as to assess how all latent variables were clustered. Principal factor analysis was used to understand the covariation between variables, while varimax rotation is considered effortless when interpreting results and centres on simplifying the columns of the factor matrix. Promax allows for correlated factors (Hair et al., 2014).

i) Validity and reliability

Reliability is about how consistently a measurement instrument derives the same result when measured between different groups of the same population (Bryman, 2010). An assessment of whether each of the items included in a composite measure makes an

independent contribution or merely duplicates the contribution of other items in the measure (Babbie, 2010) is referred to as an item analysis. Therefore, in order to identify which items in the electronic questionnaire should remain and which items should be deleted from the instrument. This is referred to as *internal consistency*, that is the degree to which responses are consistent across the items within a measure (Green & Salkind, 2014).

The following steps were followed to determine the validity and reliability of the questionnaire instrument (see Annexures 2, 3, 4 and 5):

Table 4.10

Measurement, description and prescribed threshold (Hair et al., 2010)

Measurement	Description	Prescribed Threshold
Communality	Total amount of variance an original variable shares with all other variables included in the analysis (Hair et al., 2010).	All variables with communalities less than .50 have no sufficient explanation
Kaiser Meyer Olkin (KMO)	A method used to decide on the number of factors to be retained for rotation and for grouping items. How strongly an item correlates with other items in the EFA correlation matrix is what is measured with the KMO or then eigenvalue, and any factor with eigenvalues less than 1 is discarded (Hair et al., 2010).	Suitability for factor analysis is indicated by a KMO value greater than .50
Bartlett's test of Sphericity (BTS)	A test statistic used to examine the hypothesis that the variables are uncorrelated in the population and provides a chi-square output that should be significant (Williams. Onsman & Brown, 2010).	Suitability for factor analysis is indicated by a BTS which is significant ($p<.05$)
Convergent and discriminant reliability	How consistent the results are for different items on the scale. In this study, the average inter-item correlation was used – providing and assessment of item redundancy or the extent to which items on a scale assess the same content (Cohen & Swerdlik, 2005). The latter was achieved by removing items with low loadings on each factor.	Accept: > .7 Remove: < .2
Convergent and discriminant validity (part of construct validity)	The variables in a single factor are highly correlated which is evident from the factor loadings. Significant loadings depend on the sample size of the dataset – the smaller the sample size, the higher the required loading will be. The extent to which factors are distinct and uncorrelated is referred to as discriminant validity (Campbell & Fiske, 1959; Marsh & Grayson, 1992). Variables should relate more strongly to their	Convergent validity: >.500 and >.700 for each factor Cross loadings: >.2 Factor correlation matrix: >.7 Factor correlation matrix >.7 is shared

Measurement	Description	Prescribed Threshold
	own factor than to another factor. The pattern matrix should be examined first, and variables should load significantly only on one factor (Sabbagha, 2018).	variance

ii) Cronbach's alpha

Cronbach's alpha was used to analyse the internal consistency (reliability) of the scores obtained on the HPO questionnaire. Cronbach's alpha provides insight into how well a set of item scores measure a single latent construct (Barry et al., 2011). De Vellis (2003) offered the following coefficient alpha "comfort ranges" for scales:

Table 4.11

Coefficient alpha "comfort ranges" for scales (De Vellis, 2003)

Classification	Scale Range
Unacceptable	0.60 or below
Undesirable	0.60 to 0.65
Minimally acceptable	0.65 to 0.70
Respectable	0.70 to 0.80
Very good	0.80 to 0.90

For this study, the researcher used a Cronbach's alpha coefficient of 0.70 to determine the acceptable reliability coefficient of the questionnaire as the measuring instrument.

❖ *Confirmatory factor analysis (CFA)*

The objective of CFA is to test whether the data fits the hypothesised measurement model, which is based on theory. In EFA the statistical method can determine the number of factors and loadings, whereas in CFA statistics show how well the theoretical specification of factors matches the reality (the actual data). CFA therefore enables the preconceived theory to either be 'confirmed' or 'rejected' (Hair et al., 2010).

The extent, to which the instrument measures what it is supposed to measure in a consistent and accurate manner, is referred to as validity (Babbie, 2014). Validity not only reflects the integrity of the conclusions generated from the research, but also entails the degree to which evidence and theory support the interpretation of test scores intended by the proposed model. There are two major forms of validity, namely internal validity (relating mainly to issues of causality) and external validity (whether results can be generalised beyond the specified research context) (Bryman, 2010). There are different forms of validity (Cooper & Schindler, 2014):

Table 4.12

Different forms of validity (Cooper & Schindler, 2014, p. 257)

Type of Validity	What is Measured	Methods
Construct validity	Degree to which the underlying instrument being used to measure captures the relevant aspects of the construct	Factor analysis, Correlation, Judgmental
Criterion-related (concurrent, predictive)	Degree to which a predictor is adequate in capturing the relevant aspect of the criterion	Correlation
Content	Degree to which content of the items adequately represents the universe of all relevant items under observation	Judgement

Construct validity consists of face validity, convergent validity, discriminant validity and nomological validity. Convergent and discriminant validity were discussed in Table 4.10. Face validity is the extent to which there is consistency between the content of the items and the construct definition and is based solely on the researcher's judgement. Nomological validity examines whether the correlations between the constructs in the measurement theory make sense (Hair et al., 2014). The researcher measured construct validity for the purposes of this study. The following measures are also used in CFA to determine validity and reliability (Hair et al., 2010, Malhotra & Dash, 2011):

Table 4.13

Validity and reliability in CFA (Adapted from Hair et al., 2010; Malhotra & Dash, 2011)

Measurement	Description	Prescribed Threshold
Composite reliability (CR)	CR measures reliability – the degree to which a latent is explained by its observed variables.	>.7
Average variance extracted (AVE)	AVE is a mean variance extracted for the items loading on a construct and is a summary indicator of convergence.	>.5
Maximum shared squared variance (MSV)	MSV measures discriminant validity – the extent to which a construct is truly distinct from other constructs. If correlation between two variables is .8. their shared variance would be .64	<AVE
Average shared square variance (ASV)	ASV, similar to MSV, also measures discriminant validity.	<AVE

Convergent validity issues indicate that the variables do not correlate well with each other in their parent factor. Discriminant validity issues indicate that the variables correlate better with variables outside their parent factor than with their parent factor (Sabbagha, 2018). The researcher made use of composite reliability (CR) and average variance extracted (AVE) for the purposes of this study.

Hair et al. (2014) contended that measurement model validity depends on (a) establishing acceptable levels of goodness-of-fit for the measurement model and (b) finding specific evidence of construct validity. Goodness-of-fit (GOF) indicates how well the specified model reproduces the observed covariance matrix among the other indicator items (i.e. the similarity of the observed and estimated covariance matrices). GOF measures are classified into three general groups, namely (a) absolute measures, (b) incremental measures, and (c) parsimony fit measures. To provide adequate evidence of model fit, the authors (Hair et al., 2014) suggested using three to four fit indices with at least one incremental index and one absolute index, in addition to the chi-square and the associated degrees of freedom. The following GOF indices were utilised:

(i) Absolute Fit Indices

Absolute Fit Indices are a direct measure of well the model specified by the researcher reproduces the observed data (Hair et al., 2014).

- Chi-square (CMIN) (X^2) Goodness-of-fit (GOF)

When comparing the proportion of cases from a sample with hypothesised values or those obtained from a comparison population, this test is used. One categorical variable and a specific proportion against which the observed frequencies are to be tested against is required (Pallant, 2011). Gatignon (2010) contended that chi-square (CMIN) test assesses the difference between observed and expected covariance matrixes, therefore, the smaller the difference the better the model fit. However, Hair et al. (2010) pointed out that, as the sample size increases, so does the statistical power of the chi-square, even if the matrixes are practically identical. Various authors disregard the chi-square index for samples larger than 200, suggesting that other GOF indices be rather used to determine GOF (Gatignon, 2010; Hair et al., 2010; Hooper, Coughlan, & Mullen, 2008).

- Root Mean Square Error of Approximation (RMSEA)

RMSEA better represents how well a model fits a population, not just a sample used for estimation. It attempts to correct for both model complexity and sample size by including each in its computation. Lower RMSEA values indicate better fit, with a value of zero indicating the best fit (Hair et al., 2014; Hooper et al., 2008). Recently however, Hu and Bentler (1999) suggested a cut-off value close to .06 for RMSEA.

- Root Mean Square Residual (RMR) and Standardized Root Mean Residual (SRMR)

Standardized residuals are deviations of individual covariance terms and do not reflect overall model fit. An overall residual value is required and there are two measures, namely, the Root Mean Square Residual (RMR), which is the square root of the mean of these squared residuals: an average of the residuals. However, the RMR is related to the scale of the covariances, therefore an alternative statistic is the standardized value of RMR (i.e. the average standardized residual). This Standardized Root Mean Residual (SRMR). This standardized value of RMR is useful for comparing fit across models. No statistical threshold level can be established; however, the researcher can assess the practical significance of the magnitude of the SRMR considering the research objectives and the observed or actual covariances or correlations. Lower RMR and SRMR values represent better fit and higher values represent worse fits. A rule of thumb is that an SRMR over .1 suggests a problem with a fit (Hair et al., 2014).

- Goodness-of-Fit Index (GFI)

The GFI is a measure of fit between the hypothesised model and the observed covariance matrix. The possible range for GFI values is 0 to 1, with higher values indicating a better fit (Hair et al., 2014; Kline, 2011).

(ii) Incremental Fit Indices

Incremental fit indices are also known as comparative or relative fit indices. They assess how well the estimated model fits relative to some alternative baseline model (Hair et al., 2014).

- Normed Fit Index (NFI)

The NFI assesses the model by comparing the chi-square value of the model to the chi-square of the null model (Hooper et al., 2008). The NFI values range between 0 and 1, and a model with perfect fit would produce an NFI of 1 (Hair et al., 2014). A major drawback to this index is that it is sensitive to sample size, underestimating fit for samples less than 200 (Bentler, 1990; Mulaik et al., 1989), which means that it cannot be used on its own.

- Tucker-Lewis Index (TLI)

The TLI is a comparison of the normed chi-square values for the null and specified model, which to some degree considers model complexity. A key advantage of this fit index is that it is not significantly affected by sample size. TLI is not normed and thus its values can fall below 0 or above 1 – models with good fit have values that approach 1 (Hair et al., 2014; Schumacker & Lomax, 2010).

- Comparative Fit Index (CFI)

The CFI, an improved version of the NFI, considers the issue of sample size and performs well when the sample size is small (Hooper et al., 2008). The CFI is normed so that values range between 0 and 1, with higher values indicating a better fit. CFI values above .90 are usually associated with a model that fits well (Hair et al., 2014; Hu & Bentler, 1999).

(iii) Parsimony Fit Indices

Parsimony indices provide information about which model among a set of competing models is best, considering its fit relative to its complexity. A parsimony fit measure

is improved either by a better fit or a simpler model – a simpler model being one with fewer estimated parameters paths (Hair et al., 2014).

- Adjusted Goodness-of-Fit Index (AGFI)

An AGFI attempts to consider differing degrees of model complexity. It does so by adjusting GFI by a ratio of the degrees of freedom used in a model to the total degrees of freedom available. The AGFI penalizes more complex models and favours those with a minimum of free paths. In proportion to model complexity, AGFI values are typically lower than GFI values. A value of over 1.0 generally indicates acceptable model fit (Hair et al., 2014).

- Parsimony Normed Fit Index (PNFI)

The PNFI adjusts the NFI by multiplying it times the PR with relatively high values representing a relatively better fit. The PNFI takes on some added characteristics of Incremental Fit Indices relative to absolute fit indices in addition to favouring less complex models. The values of the PNFI should be used in comparing one model to another with the highest PNFI value being most supported with respect to the criteria captured by this index (Hair et al., 2014). A summary of the model-fit criteria and model-fit interpretation that was used in this study is presented in Table 4.14 below:

Table 4.14

Model-fit criteria and interpretation (Adapted from Schumacker & Lomax, 2010, p. 76)

Model-Fit Criterion	Acceptable Level	Interpretation
Goodness-of-fit index (GFI)	0 (no fit) to 1 (perfect fit)	Value close to .90 or .95 reflect a good fit
Adjusted GFI (AGFI)	0 (no fit) to 1 (perfect fit)	Value adjusted for *df*, with .90 or .95 represents a good model fit
Root Mean Square Error of	.05 to .08	Value of .05 to .08 indicate close fit

Model-Fit Criterion	Acceptable Level	Interpretation
Approximation (RMSEA)		
Root Mean Square Residual (RMR) and Standardized Root Mean Residual (SRMR)	Less than .1	Lower RMR and SRMR values represent a better fit and higher values represent a worse fit.
Tucker-Lewis Index (TLI)	0 (no fit) to 1 (perfect fit)	Value close to .90 or .95 reflects a good model fit
Normed Fit Index (NFI)	0 (no fit) to 1 (perfect fit)	Value close to .90 or .95 reflects a good model fit
Comparative Fit Index (CFI)	0 (no fit) to 1 (perfect fit)	Value close to .90 or .95 reflects a good model fit
Parsimony Normed Fit Index (PNFI)	0 (no fit) to 1 (perfect fit)	Value close to .90 or .95 reflects a good model fit

(c) Step 3: Descriptive analysis and correlation analysis

❖ *Descriptive analysis*

The ordering and summarising of data by means of tabulation and graphic presentations is referred to as descriptive statistics (Durrheim, 2006; Steyn, Smith, Du Toit, & Strasheim, 2003.). The process entails the organising and summarising of the univariate (one variable is analysed at a time) and bivariate analysis (two or more variables are analysed at a time) of quantitative data. Univariate data analysis is concerned with measures of central tendency (arithmetic means) and measures of dispersion (standard deviation and range).

The arithmetic average of a group of scores is referred to as the mean. The standard deviation is the measure of the extent to which a group of scores vary about their mean (Christensen, 2001). In application to this study the sample mean was used both as a measure of central tendency as well as to estimate the population mean.

Tredoux and Durrheim (2002) suggested that standard deviation, as a measure of variation, assists in understanding the variability in the dataset. The standard deviation is the most used measure of variability (Green & Salkind, 2014). The smaller the standard deviation, the more tightly the values are clustered around the mean; if the standard deviation is high, the values are widely spread out (Babbie, 2010).

A frequency distribution is a description of the number of times that the various attributes of a variable are observed in a sample (Babbie, 2010). Tredoux and Durrheim (2002) stated that this is an efficient way to summarise the information on the number of times the given score appears within the dataset. The frequency tables were used to describe the three samples of the population.

Cooper and Schindler (2014) referred to skewness as a measure of the distribution's deviation from symmetry. If the mean, median, and mode are in the same location, a symmetry distribution classifies the data. Depending on which side has majority of scores, the opposite of the symmetric distribution could either be negatively or positively skewed distribution. Measuring the distribution's peakedness or flatness in relation to normal distribution, is referred to as kurtosis. Skewness and kurtosis values ranging between -1 and +1 normal ranges are recommended for conducting parametric tests and were used accordingly in this study.

❖ *Correlation analysis*

The direction of the strength of the relationship between two or more variables is tested by correlation statistics, and the strength of this relationship is represented by a correlation coefficient (Bryman, 2010). Pearson Product-Moment Correlation coefficient (r) is used to typically calculate the magnitude or direction and strength of the relationship between variables (Cooper & Schindler, 2014). A negative value signifies an inverse relationship, while the strength of the linear relationship is determined by the absolute value of *p*. The *p* value provides an indication of the significance of the relationship and represents the population correlation. The general convention is that significance level $p \leq 0.05$ is used to conduct a hypothesis test (Sabbagha, 2017).

Group mean differences are discussed next.

(d) Step 4: Testing for significant differences between groups

During this step, the data was tested for group differences to compare the variance between groups with the variability within groups of respondents based on years of work, age, race, gender and job level to determine whether significant difference exist. As a result of the large sample size and the adoption of the central limit theorem, the researcher decided to use parametric tests as part of the data analysis.

Parametric tests in the form of *t*-tests and Analysis of Variance (ANOVA) tests were conducted to determine whether there exist any significant differences between the mean scores of groups. A *t*-test analyses the data differences between the means of two groups, while ANOVA tests compares the mean scores of more than two groups, that is the variance (variability in scores) *between* the different groups (believed to be due to the independent variable) is compared with the variability *within* each of the groups (believed to be due to chance) (Pallant, 2011).

The method of one-way between-groups ANOVA with post hoc tests was used in the analysis process. Having one independent (grouping) variable with three or more levels (groups) and one independent variable, one-way between-groups ANOVA is used. "One-way" refers to the fact that there is only one independent variable, while "between-groups" refers to the different participants in each of the groups (Pallant, 2011).

4.2.2.3 Stage 5: Refine the proposed HPO model

As a final step, a newly designed High Performance Model for an IT organisation was developed.

4.3 CHAPTER SUMMARY

This chapter discussed the research design used in the study. Phase one discussed the literature review and phase two the empirical study. Phase one was divided into stage one exploring the literature review of HPOs and stage two, designing a proposed theoretical HPO model. Phase two, the empirical study, was broken into stages three to five discussing administration of the questionnaire, data analysis and finally, refinement of the proposed HPO model.

In the next chapter the research results will be discussed.

CHAPTER 5: RESEARCH RESULTS

An investigator starts research in a new field with faith, a foggy idea, and a few wild experiments. Eventually the interplay of negative and positive results guides the work. By the time the research is completed, he or she knows how it should have been started and conducted – Donald Cram.

5.1 INTRODUCTION

The statistical results of the study are reported in this chapter; furthermore, the empirical findings are outlined and discussed, as well as a summary of the hypotheses.

The following specific empirical aims of the research are discussed in this chapter:

- Research aim 1: To gather data by means of three measurements, over six years, which can be used to determine statistically the organisational and behavioural variables that influence High Performance in an IT organisation in South Africa.
- Research aim 2: To validate the questionnaire instrument and determine its reliability.
- Research aim 3: To validate the IT organisation's High Performance Model by means of EFA and CFA.
- Research aim 4: To determine if any changes relating to the HPO model took place between the first, second and third questionnaires.
- Research aim 5: To assess whether the biographical variables play a role in high performance.

The data analysis consisted of four main steps each with a set of applicable sub-steps:

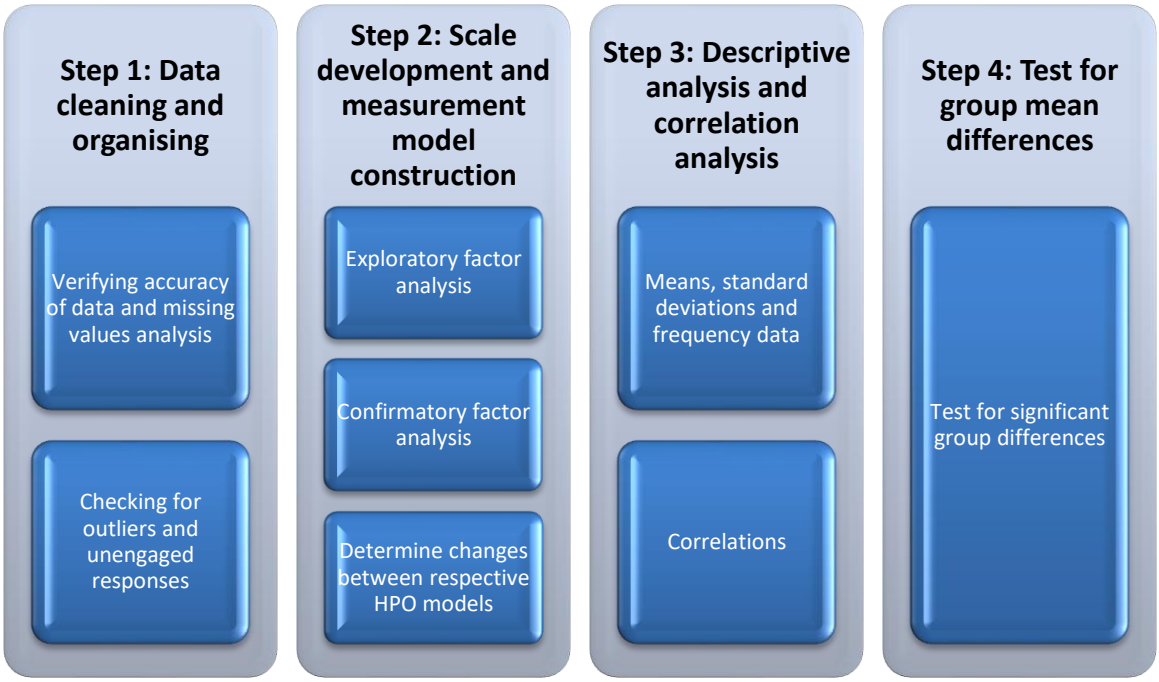


Figure 5.1. Data analysis process (Adapted from Sabbagha, 2018)

The four main steps will be discussed in the rest of the chapter, that is data cleaning and organising, scale development and model construction, descriptive analysis, and correlation analysis as well as group differences.

5.2 RESEARCH HYPOTHESES FORMULATION

Neuman (1997 p. 108) defined a hypothesis as a "proposition to be tested or a tentative statement of a relationship between two variables." Furthermore, Neuman (1997) contended that hypotheses are accepted when they are statistically proven and rejected when scientific observation cannot answer hypothesis statements. In addressing the empirical objectives of the research study, the following research hypotheses were formulated:

Hypothesis 1: The HPO questionnaire is valid and reliable.

Hypothesis 2: The IT organisation's HPO model is valid and consistent.

Hypothesis 3: Changes relating to the HPO model took place between the first, second and third questionnaires.

Hypothesis 4: The biographical groups differ significantly in terms of construct levels of high performance.

The results in the data analysis process will now be discussed, that is steps 1-4.

5.3 STEP 1: DATA CLEANING AND ORGANISING

Firstly, case or data screening was conducted. This is a crucial step before analysis can commence. The data screening included verifying the accuracy of data and missing values analysis, that is scrutinising the questionnaires to ensure all questions were answered; only fully completed questionnaires were used for data analysis. Secondly, outliers and unengaged responses were identified. This entailed inspecting the means and standard deviations of the data to identify possible outliers or unengaged responses; cases with a standard deviation of <0.3 were excluded from further analysis. Furthermore, a check was conducted to identify cases in which all items were given the same ratings by the relevant respondent, irrespective of the construct being measured. In such instances, the responses were disregarded.

The following table illustrates the number of questionnaires excluded from the analysis for each of the respective years:

Table 5.1

Missing values, outliers and/or unengaged responses

	2012	2014	2016
Total questionnaires	1145	746	1560
Questionnaires disregarded	55	12	92
Questionnaires used for data analysis	1090	734	1468

In 2012, a total of 1,145 questionnaires were completed, of which 55 were excluded for data analysis. In 2014, fewer questionnaires were completed (746) of which 12 questionnaires were disregarded. Of the 1,560 questionnaires completed in 2016, 92 questionnaires were excluded from data analysis. 1,468 questionnaires were deemed complete and sufficient for analysis.

In the next step, factor analysis in the form of exploratory and confirmatory factor analysis is discussed.

5.4 STEP 2: SCALE DEVELOPMENT AND MEASUREMENT MODEL CONSTRUCTION

In this step of the data analysis, EFA is discussed for 2012, 2014 and 2016 as well as CFA for 2016.

5.4.1 Exploratory Factor Analysis (EFA)

As discussed in Chapter 4, EFA is about gathering information and exploring relationships between a set of variables (Costello & Osborne, 2005). To arrive at the final factor pattern matrix, the following steps were conducted:

- Identify items not associated with underlying factors by checking communalities.
- Assessing the Kaiser-Meyer-Olkin (KMO) value and Bartlett's test for sphericity to determine the adequacy of data.
- Assessing convergent and discriminant reliability.
- Assessing convergent and discriminant validity.

- Through use of the Cronbach alpha coefficient, assessing and reviewing internal reliability.

For detailed results see Annexures 2, 3, 4, and 5.

5.4.1.1 Reporting on EFA for 2012, 2014 and 2016

The following were examined: communalities, adequacy, convergent and discriminant validity, as well as the internal consistency of the data. This included examining the extraction column of each of the data communalities, the KMO, Bartlett's test of sphericity, pattern matrix and goodness-of-fit test before a final correlation matrix was arrived at.

All variables with communalities less than .50 were highlighted as this meant that the item did not seem to correlate strongly with all the other items. When examining the pattern matrix, both low loadings (<0.7) and high cross loadings (less than 0.2 difference) in each factor were highlighted (Hair et al., 2010). The aim was to identify items that were not significantly reflective of the construct being measured. Before removing any items, the researcher reviewed each of the highlighted items to ensure face validity. After the latter exercise, the items were completely removed in order to isolate the factors and items for the next step in data analysis, that is CFA. This exercise was therefore an item reduction exercise in order to identify items that could be considered not significantly reflective of the construct being measured.

Table 5.2 illustrates the number of items removed from the initial HPO questionnaire which contained 91 items.

Table 5.2

High Performance Organisation questionnaire with original questions indicating questions that did not load on factor analysis for the respective years 2012, 2014, and 2016

Questions		Questions not loading on Factor Analysis 2012	Questions not loading on Factor Analysis 2014	Questions not loading on Factor Analysis 2016
Employer of choice				
9.	I am proud to work for the organisation.			
10.	If offered the opportunity to choose, I would prefer to work for the organisation above other employers.			
11.	I would recommend the organisation to my friends and family as a good place to work.			
12.	My immediate supervisor inspires the people in my team.			
13.	I like the work I do.			
14.	We retain our best skilled employees.	x	x	**x**
Employee Engagement				
15.	My immediate supervisor cares about me as a person.			
16.	In my team we go to great lengths to please our customers.	x	x	
17.	In my team we produce outstanding quality of work.	x	x	
18.	I feel committed to the organisation.			**x**
19.	I am motivated to do better by the example set by my supervisor.			
20.	I am willing to go above and beyond the call of duty.	x	x	**x**
21.	I value and believe in the organisation as an organisation.			**x**
Diversity				
22.	The organisation caters for the needs of disabled people.	x	x	**x**
23.	The organisation has a reputation of advancing previously disadvantaged employees.	x	x	**x**
24.	In my team diverse cultural perspectives are valued.	x	x	**x**
25.	The best skilled people are appointed in the organisation irrespective of race, gender, etc.	x	x	**x**
Leadership				
26.	My immediate supervisor is competent.			
27.	My immediate supervisor listens to our suggestions and concerns.			

Questions		Questions not loading on Factor Analysis 2012	Questions not loading on Factor Analysis 2014	Questions not loading on Factor Analysis 2016
28.	I trust my immediate supervisor.			
29.	I believe the current leadership has what it takes to achieve the organisation's vision.			
30.	I trust the organisation's executive leadership.			
31.	My immediate supervisor is knowledgeable in his/her area of responsibility.			
32.	My immediate supervisor routinely helps me to improve my performance.			
33.	My immediate supervisor leads by example.			
Vision, Mission and Values				
34.	I think the organisation is the leading ICT (Information and Communication Technology) agency which enables public sector service delivery.			
35.	I know how my job role fits into the total picture of the organisation.	x	x	**x**
36.	I am inspired by the organisation's vision for the future.			
37.	I think that the behavior of the organisation's employees is in line with our company's values *(service excellence, integrity, fairness, transparency, innovation).*	x	x	
38.	I think that the behavior of my immediate supervisor is in line with our company's values *(service excellence, integrity, fairness, transparency, innovation).*			
39.	I think that the behavior of the organisation's leaders is in line with our company's values *(service excellence, integrity, fairness, transparency, innovation).*			
Change and Renewal				
40.	The organisation management is honest and open about change.	x	x	**x**
41.	In the organisation we know what to do to participate in change processes.	x	x	**x**
42.	I believe the current changes will have a positive impact on my work.			
43.	I believe the current changes will have a positive impact on our customer service delivery.			
44.	I am flexible to meet the changes that are required in our organisation to become a leading ICT (Information and Communication Technology) agency that enables public sector service delivery.	x	x	**x**
45.	When changes are made that affect my department the reasons for the change are explained.			

Questions		Questions not loading on Factor Analysis 2012	Questions not loading on Factor Analysis 2014	Questions not loading on Factor Analysis 2016
46.	When changes are made that affect my department appropriate training and guidance is provided.			
47.	When changes are made that affect my department resources and support for implementing the change are provided.			
48.	When changes are made that affect my department the changes are well planned and implemented.			
49.	When changes are made that affect my department we know how to maintain the changes once it is implemented.			
Work Environment				
50.	I am satisfied with the quality of equipment (e.g. computers, software, IT systems) which I use in my work.			
51.	The physical set-up at work allows me to do my best (*e.g. furniture, lighting, air conditioning, etc.*).			
52.	I have the resources I need to perform my job effectively.			
53.	The organisation has the necessary systems and processes to support me in providing good customer service.			
Employee Satisfaction				
54.	I am satisfied with my involvement in decisions which affect my work.	x	x	**x**
55.	I am satisfied with the salary Total Guaranteed Package offered by the organisation as compared to the market for the position I occupy.	x	x	**x**
56.	A relaxed, yet dynamic, atmosphere exists in the organisation.	x	x	**x**
57.	I am satisfied with career opportunities available within the organisation.	x	x	**x**
58.	My role is challenging.			
59.	I feel empowered to perform my role effectively.	x	x	
60.	I am satisfied with the manner in which I am using my skills, knowledge and experience to render good service to our customers.			
61.	I am satisfied with the training I receive to improve my job knowledge and skills.			**x**
Employer Brand				
62.	The organisation has a good reputation with their external customers.			
63.	I feel our service to our customers usually exceeds their expectations.			

Questions	Questions not loading on Factor Analysis 2012	Questions not loading on Factor Analysis 2014	Questions not loading on Factor Analysis 2016
64. I am proud to be associated with the organisation's employer brand.			**x**
65. I think the organisation brand is highly rated.	x	x	
66. I think the organisation brand is an ethical brand which is respected by our customers.	x	x	
67. The organisation is well-known as an employer to the outside world.	x	x	**x**
68. I am aware of what makes the organisation different to our competitors.	x	x	**x**
Organisational Culture			
69. In the organisation employees are allowed to have and share their point of view.			
70. The organisation encourages its employees to be involved in decision-making.			
71. The organisation is flexible in their practices regarding a work and life balance.			
72. The organisation has established a culture where people are willing to say what management really needs to know, rather than what they think management wants to hear.			
73. People in my team routinely look for creative ways to resolve issues.	x	x	
74. I am encouraged to come up with new and better ways of doing things.	x	x	**x**
75. The organisation has a common language and terminology across the business.	x	x	
76. The organisation has a standard way of doing business with clients and, or employees.	x	x	**x**
Building High Performance Organisation			
77. Management rewards employees who take risks to serve our customers better.	x	x	
78. I think employees in my team know what to do to meet our customer satisfaction goals.	x	x	**x**
79. In my team, everyone is clear about the organisation's performance expectations.	x	x	**x**
80. My team's performance measures are clearly defined.	x	x	**x**
81. Our internal processes are designed to excel at giving our customers what they need.	x	x	**x**
82. The corporate performance measures match the organisation's strategic objectives.	x	x	**x**
Knowledge Management			
83. In our team we share work experiences with each other.			
84. In our team we create new knowledge by			

	Questions	Questions not loading on Factor Analysis 2012	Questions not loading on Factor Analysis 2014	Questions not loading on Factor Analysis 2016
	engaging in discussions among one another.			
85.	My colleagues are willing to use knowledge that others in the organisation share with them.			
86.	In our team we determine the type of knowledge that is important to getting the job done.			
87.	Team members and leaders in my team willingly apply their knowledge to improve problem solving.			
88.	My immediate manager creates an awareness of organisational challenges.			
89.	Experts in the organisation are willing to share their knowledge.			
90.	Employees in the organisation are encouraged to openly share their knowledge.			
91.	Our team has access to the knowledge of the organisation's experts that is needed for the organisation to be a lead organisation.			
92.	The organisation supports interaction between employees who share a work interest, to acquire knowledge that enables public service delivery.			
93.	The organisation supports interaction with external stakeholders and customers to acquire knowledge that enables public service delivery.			

Note: X indicates items removed.

For the 2012 and 2014 data, 32 items were removed through exploratory factor analysis. For the 2016 data, 27 items were removed. Considering the factor analysis performed, the number of questions was reduced, and the construct labels changed as follows:

Table 5.3

Construct label changes

Old Construct Label (before factor analysis)	New Construct Label (after factor analysis)	Acronym
Employer of Choice	Employer of Choice (unchanged)	EC
Employee Engagement	Construct removed	
Diversity	Construct removed	
Leadership	Leadership	LS
Vision, Mission, and Values	Construct removed	

Old Construct Label (before factor analysis)	New Construct Label (after factor analysis)	Acronym
Change and Renewal	Change and Renewal (unchanged)	CR
Work Environment	Work Environment (unchanged)	WE
Employee Satisfaction	Job Satisfaction	JS
Employer Brand	Employer Brand (unchanged)	EB
Organisational Culture	Construct removed	
Building a High Performance Organisation	Construct removed	
Knowledge Management	Divided into two constructs, that is: a. Knowledge Management - organisation	KM_O
	b. Knowledge Management - team	KM_T
CMMI Institutionalisation	Construct removed	
	Strategic focus (added)	SF

The HPO questionnaire for all three years, consisted of 13 constructs. After factor analysis, six (6) constructs were removed (i.e. Employee Engagement, Diversity, Vision, Mission and Values, Organisational Culture, Building High Performance Organisation and CMMI Institutionalisation), four (4) constructs remained unchanged (i.e. Employer of Choice, Change and Renewal, Work Environment, and Employer Brand), one (1) construct was divided into two (i.e. Knowledge Management divided into Knowledge Management – organisation and Knowledge Management – team) and one (1) construct was added (Strategic Focus).

The results for KMO, Bartlett's test of sphericity, percentage of variation and residuals can be illustrated as follows:

Table 5.4

KMO, Bartlett's test of sphericity of HPO questionnaires 2012, 2014, and 2016

		2012	2014	2016
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.962	0.956	0.949
Bartlett's Test of Sphericity	Approx. Chi-Square	49338.92	28988.05	45062.015
	df	1378	1378	741
	Sig.	0.000	0.000	0.000

All items in the questionnaire for all three iterations of the questionnaire had a KMO score higher than the recommended 0.5, which, according to Lance et al. (2006), indicates that the sample was adequate for factor analysis. As a result of large KMO values, the correlation patterns are relatively compact and factor analysis would extract clearly separable and reliable factors. All items had a score of zero for Bartlett's test, which indicates that factor analysis could be interpreted meaningfully as the correlation matrix was not an identity matrix (Hair et al., 2010). As a result of low communalities scores (<0.3), low loadings (<0.7) and high cross-loadings (>0.2), 32 items were removed for the 2012 and 2014 data, and 27 items were removed for the 2016 data.

5.4.1.2 Reporting of internal consistency reliability (2016 data)

This section reports on the internal consistency and item reliability of the HPO questionnaire. In table 5.5 the Cronbach alpha coefficients for the various dimensions are reported on, as well as the inter-item correlation mean score. The latter examines the extent to which scores on one item are related to scores on all the other items in a scale. The 2016 data was used as it proved more stable and reliable than the 2012 and 2014 data (see 5.4.2 for a more detailed explanation in this regard). Cohen and Swerdlik (2005) believed that it provides an assessment of item redundancy – the extent to which items on a scale assess the same content. The average inter-item correlation for a set of items should be between .20 and .40 which suggests that, while the items are reasonably homogeneous, they do contain sufficiently unique variance to not be isomorphic with each other.

Table 5.5

Internal reliability of the HPO questionnaire (n = 1,468)

HPO Dimensions	Number of Items	Alpha Score	Inter-item Mean Score
Leadership	11	0.969	0.742
Knowledge Management - organisation	10	0.905	0.491
Employer of Choice	3	0.891	0.732
Knowledge Management - team	6	0.911	0.634
Strategic Focus	6	0.887	0.569
Change and Renewal	5	0.901	0.649
Work Environment	3	0.802	0.576
Employer Brand	6	0.893	0.584
Job Satisfaction	3	0.741	0.489
Total	**53**	**0.878**	

The Cronbach alpha coefficient of the nine dimensions ranged from 0.741 to 0.969 for the total sample (n = 1,468). The total HPO questionnaire obtained a Cronbach alpha coefficient of 0.878 which can be regarded as a particularly good score (DeVellis, 2003). The inter-item mean score for the variables was between 0.489 and 0.742; therefore, all variables fell above the suggested 0.40 threshold (Cohen & Swerdlik, 2005).

The means and standard deviations of the HPO questionnaire are discussed next. The descriptive results are discussed in terms of the values generated by each of the dimensions of the HPO questionnaire. The latter is scored by obtaining a mean score across all the items in each dimension. Each item score ranges from 1 (strongly disagree) to 5 (strongly agree), with a score of 1 as the minimum and 5 as the maximum.

Castro and Martins (2010) referred to an indication made by the Human Sciences Research Council (HSRC) where an average of 3.2 is a good guideline to distinguish between positive and potential negative perceptions. Considering this, the researcher adopted the

recommended cut-off score of 3.2 as a guideline to differentiate between potentially positive and negative perceptions. This implies that a mean score above 3.2 indicates a positive perception, while a mean score below 3.2 indicates a negative perception. Hence a positive perception indicates a high performing organisation, while a negative perception indicates developmental gaps to obtaining high performance. Table 5.6 provides the descriptive information on the HPO dimensions:

Table 5.6

Means and standard deviations of the HPO questionnaire (n = 1,468)

HPO Dimensions	Mean	Minimum	Maximum	Standard Deviation
Leadership	3,40	3,18	3,66	1.151
Knowledge Management - organisation	2,95	2,40	3,23	1.343
Employer of Choice	3,30	3,14	3,56	1.135
Knowledge Management - team	3,65	3,53	3,75	1.065
Strategic Focus	3,22	3,00	3,56	1.188
Change and Renewal	2,85	2,64	3,04	1.150
Work Environment	2,77	2,48	2,95	1.190
Employer Brand	2,79	2,54	3,06	1.204
Job Satisfaction	3,52	3,26	3,69	1.130

Leadership, Employer of Choice, Knowledge Management – team, Strategic Focus as well as Job Satisfaction have means above 3.2 which indicate that employees perceive these constructs to sufficiently contribute to high performance. Therefore, the extent to which supervisors are competent; listen; are knowledgeable in their area of responsibility; help employees; and lead by example; the extent of trust between employees and immediate supervisors; as well as employees' belief in the current leadership to achieve the organisation's vision and the level of trust between employees and executive leadership all contribute to high performance. Furthermore, the job satisfaction levels of employees in terms of involvement in decision-making; salary package; career and training opportunities; challenging roles; empowerment and use of skills; and expertise also contribute to high performance. Finally, the extent to which employees are proud to work for the organisation; would recommend the organisation as a good place to work; like their work; are inspired by

immediate supervisor; and the extent to which the organisation retains its best skilled employees, also contribute to high performance.

The results highlight the fact that employees perceive that Work Environment (M = 2.77; SD 1.19) do not contribute sufficiently to high performance. The results therefore show that employees are not satisfied with the quality of equipment; physical work set-up; availability of resources to perform work effectively and systems and processes in support of providing good customer service.

Furthermore, the results also indicate that respondents perceive Employer Brand (M = 2.79; SD = 1.20) do not sufficiently contribute to high performance. It was inferred that the extent to which the employer brand is highly rated; ethical; known to the outside world; reputable; proudly associated with from an employee perspective; and awareness of what makes it different to competitors, have to be developed in order to obtain high performance.

Employees also perceived that Change and Renewal do not sufficiently contribute to high performance (M = 2.85; SD = 1.15). This indicates that the flexibility to meet required changes; the effect of the current changes on work and customer service delivery; participation in change processes; management's honesty and openness during change and the way change is managed in terms of explanation; training; resources; support; planning and monitoring changes, once implemented, are all aspects of high performance need to be developed.

Lastly, the results highlight the fact that employees perceive Knowledge Management – Organisation (M = 2.95; SD = 1.34) as not sufficiently contributing to high performance compared to the other dimensions. The results therefore show that employees' behaviour in terms of sharing; creating; willingness to use and apply others knowledge to improve problem solving need to be developed to achieve high performance. The extent to which experts in the organisation are willing to share their knowledge; and whether employees have access to organisation experts' knowledge needed to be a lead organisation also needs to be

developed. Finally, management's support of interaction between employees and external stakeholders to acquire knowledge that enables public sector service delivery; and the extent to which managers create an awareness of organisational challenges, also need to be developed in order to achieve high performance.

The next step in the data analysis process was CFA, which is discussed in the next section.

5.4.2 Confirmatory Factor Analysis (CFA)

Identifying the subscales of each construct in EFA lead to the revelation of valid and reliable factors, which were now ready for CFA. The aim in this step was to test whether the measures of a construct were consistent with the researcher's understanding of the nature of the construct. Hair et al (2010) is of the opinion that CFA enables our preconceived theory to either be 'confirmed' or 'rejected'.

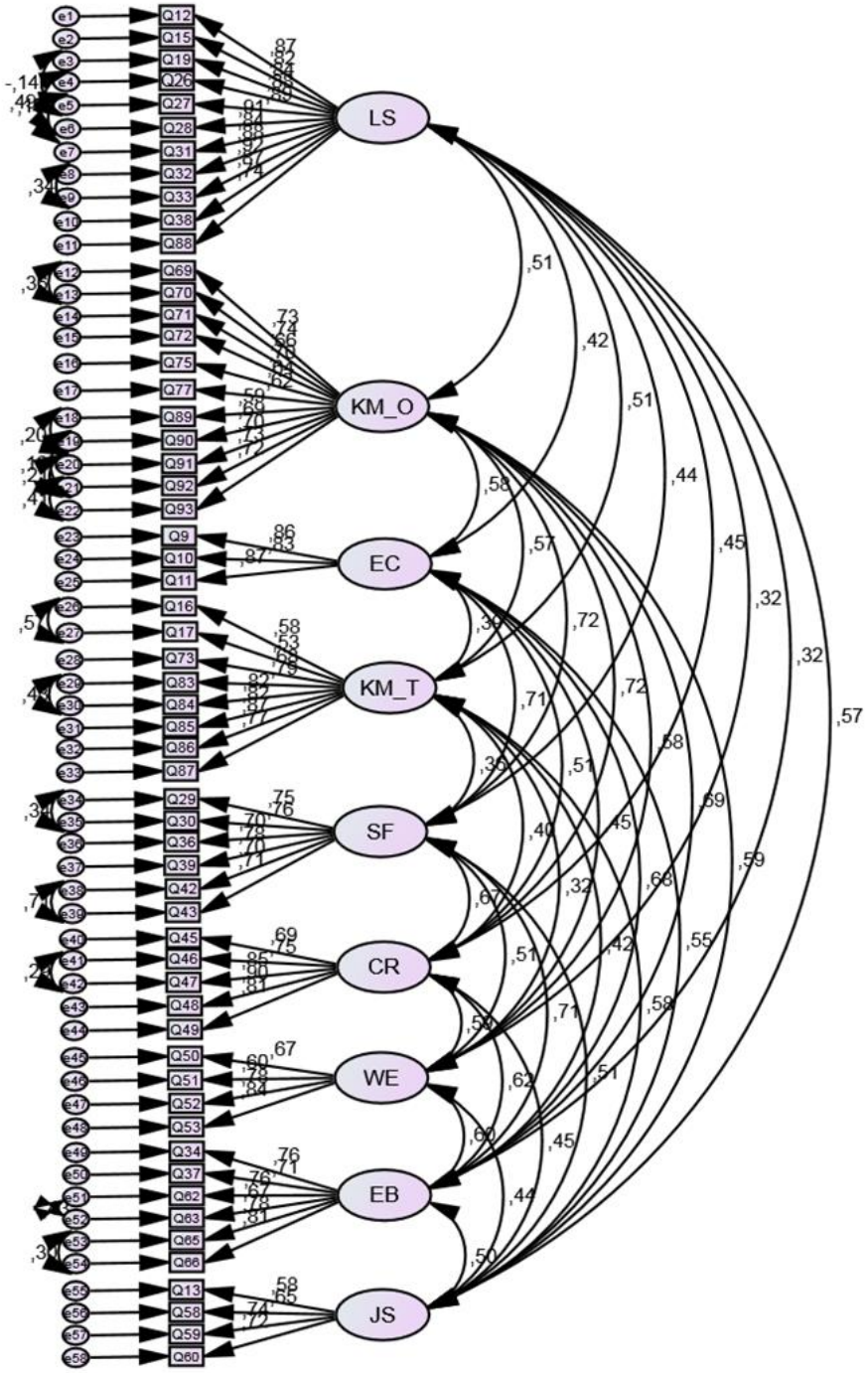
The researcher will now discuss the CFA for HPO Models 1, 2, and 3 based on the 2016 data. As mentioned earlier, the 2016 data seemed more appropriate for use in CFA, as it is more recent and therefore more useful. Furthermore, the organisation used for this study was going through large scale leadership changes and organisational restructuring during 2012 continuing into 2014 therefore the researcher is of the opinion that the 2016 data was more stable and reliable. The 2012 and 2014 data were still considered useful and therefore used for comparative and/or tracking purposes instead.

For detailed CFA Results see annexures 6, 7, 8, 9 and 10.

5.4.2.1 Reporting on CFA for HPO Model 1 (2016)

a) Model fit statistics HPO Model 1 (2016)

HPO Model 1 (2016) is the original measurement model based on 2016 data. Figure 5.2 illustrates the first HPO model referred to as Model 1, followed by the model fit statistics in Table 5.7.



Note:

Direct causal relationship =

Correlations between variables =

Error between actual and predicted value

Figure 5.2. Baseline HPO Model 1 (2016)

Table 5.7

Goodness-of-fit indices for HPO Model 1 (2016)

Indices	Value
Absolute Fit Indices	
Chi-squire (CMIN)	5380.444
Chi-square degrees of freedom (d)	1543
P-value	0.000
Minimum discrepancy divided by its degrees of freedom (CMIN/df)	3.487
Goodness-of-Fit Index (GFI)	.879
Root Mean Square Error of Approximation (RMSEA)	.041
Root Mean Square Residual (RMR)	.060
Standardized Root Mean Residual (SRMR)	.0480
Incremental Fit Indices	
Normed Fit Index (NFI)	.918
Tucker Lewis Index (TLI)	.936
Comparative Fit Index (CFI)	.940
Parsimony Fit Indices	
Adjusted Goodness-of-Fit (AGFI)	.866
Parsimony Normed Fit Index (PNFI)	.857

A chi-square of 53880.444 with 1543 degrees of freedom, p-value of 0.000, was obtained. The following statistics indicate a good fit, as outlined by Schumaker and Lomax (2010), where GFI, AGFI, TLI, NFI CFI and PNFI are all close to .90 or .95, RMR and SRMR are both lower than 1 and RMSEA is lower than 0.6 (Bentler, 1999). However, the following does not indicate a good fit: CMIN/df is not <3.

Gatignon (2010) contended that the chi-square (CMIN) test assesses the difference between observed and expected covariance matrixes, therefore, the smaller the difference, the better the model fit. However, Hair et al. (2010) pointed out that, as the sample size increases, so does the statistical power of the chi-square, even if the matrixes are practically identical. The chi-square value obtained in Table 5.10 does not indicate a good model fit, but the size of the sample (n = 1,468 after listwise deletion) reduces the meaningfulness of this GOF index (Gatignon, 2010). Various authors disregard the chi-square index for samples larger than 200, suggesting that

other GOF indices rather be used to determine GOF (Gatignon, 2010; Hair et al., 2010; Hooper et al., 2008).

b) Validity and reliability for HPO Model 1 (2016)

Validity and reliability for HPO Model 2 (2016) are illustrated in Table 5.8:

Table 5.8

Validity and reliability for HPO Model 1 (2016)

	CR	AVE
JS	0,767	0,454
LS	0,969	0,742
KM_O	0,907	0,471
EC	0,891	0,732
KM_T	0,905	0,551
SF	0,873	0,535
CR	0,901	0,647
WE	0,815	0,528
EB	0,885	0,563

Composite reliability (CR) shows that all constructs were explained by their observed variables as they were above the recommended threshold of .70 (Hair et al., 2010). Convergent reliability (AVE) for JS and KM_O were slightly lower than the recommended .50 (Hair et al., 2010) however, it was evaluated as only marginal and the constructs were retained.

c) Correlations for HPO Model 1 (2016)

Correlations for HPO Model 1 (2016) are illustrated in Table 5.9:

Table 5.9

Correlations for HPO Model 1 (2016)

			Estimate
LS	<-->	KM_O	0.511
LS	<-->	EC	0.419
LS	<-->	KM_T	0.51
LS	<-->	SF	0.44
LS	<-->	CR	0.448
LS	<-->	WE	0.323
LS	<-->	JS	0.567
LS	<-->	EB	0.321
KM_O	<-->	EC	0.577
KM_O	<-->	KM_T	0.571
KM_O	<-->	SF	0.725
KM_O	<-->	CR	0.722
KM_O	<-->	WE	0.583
KM_O	<-->	JS	0.59
KM_O	<-->	EB	0.69
EC	<-->	KM_T	0.391
EC	<-->	SF	0.715
EC	<-->	CR	0.508
EC	<-->	WE	0.448
EC	<-->	JS	0.553
EC	<-->	EB	0.677
KM_T	<-->	SF	0.356
KM_T	<-->	CR	0.401
KM_T	<-->	WE	0.32
KM_T	<-->	JS	0.581
KM_T	<-->	EB	0.42
SF	<-->	CR	0.675
SF	<-->	WE	0.513
SF	<-->	JS	0.511
SF	<-->	EB	0.712
CR	<-->	WE	0.585
CR	<-->	JS	0.451
CR	<-->	EB	0.62
WE	<-->	JS	0.439
WE	<-->	EB	0.604
JS	<-->	EB	0.503

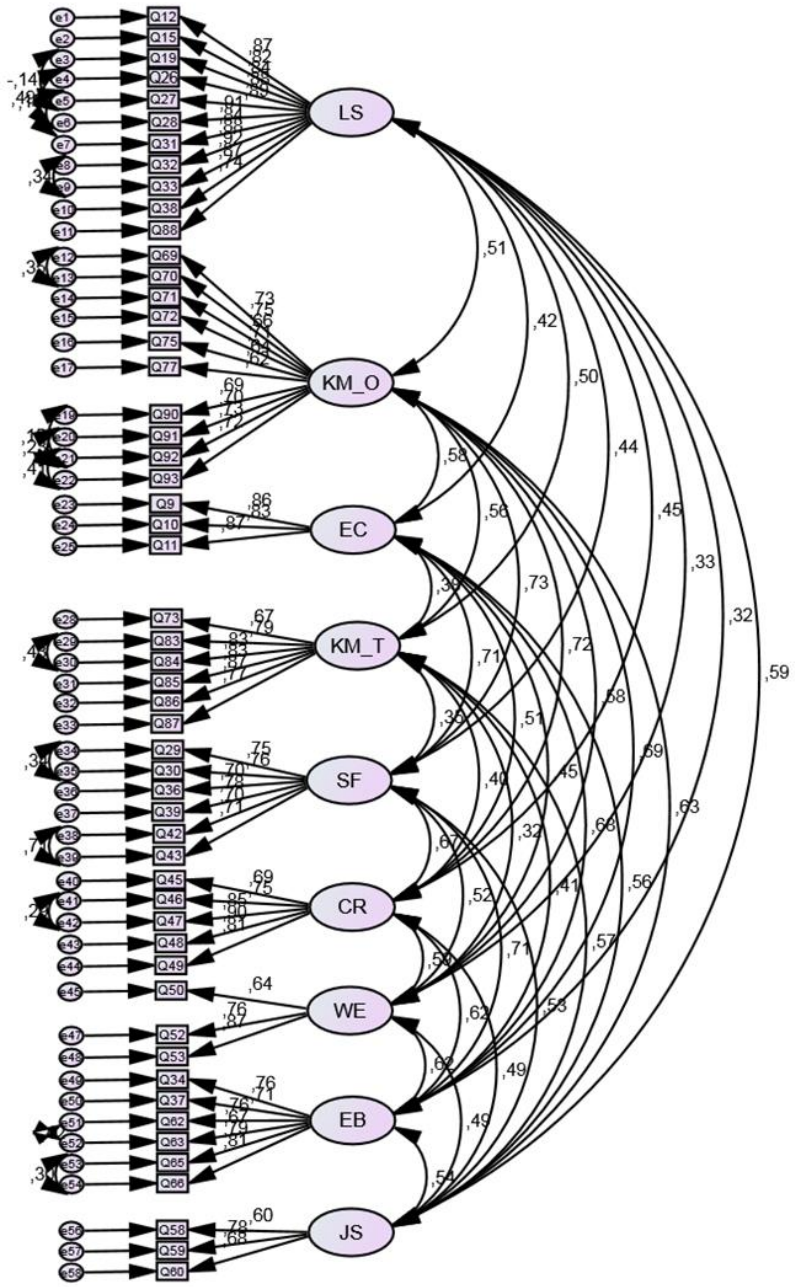
Linear correlations (dependence) existed between LS and KM_O, LS, and KM_T, as well as LS and JS. There were correlations between KM_O and seven of the nine the constructs namely EC, KM_T, SF, CR, WE, JS, and EB. Furthermore, correlations existed between EC and SF, CR, JS and EB. KM_T and JS also indicated correlation. SF indicated correlations with CR, WE, JS and EB while CR indicated correlations with, WE and EB. Lastly, WE indicated correlation with EB and JS with EB.

5.4.2.2 Reporting on CFA for HPO Model 2 (2016)

a) Model fit statistics for HPO Model 2 (2016)

HPO Model 2 (2016) is the measurement model after five items which did not load on factor analysis were removed (i.e. items 13, 16, 17, 51, and 89).

Figure 5.3 illustrates the HPO model referred to as Model 2, followed by the model fit statistics in Table 5.10.



Note:

Direct causal relationship =

Correlations between variables =

Error between actual and predicted value

Figure 5.3: High Performance Model 2 (2016)

Table 5.10

Goodness-of-fit indices for HPO Model 2 (2016)

Indices	Value
Absolute Fit Indices	
Chi-squire (CMIN)	4482.171
Chi-square degrees of freedom (d)	1275
P-value	0.000
Minimum discrepancy divided by its degrees of freedom (CMIN/df)	3.515
Goodness-of-Fit Index (GFI)	.890
Root Mean Square Error of Approximation (RMSEA)	.041
Root Mean Square Residual (RMR)	.057
Standardized Root Mean Residual (SRMR)	.0454
Incremental Fit Indices	
Normed Fit Index (NFI)	.927
Tucker Lewis Index (TLI)	.942
Comparative Fit Index (CFI)	.947
Parsimony Fit Indices	
Adjusted Goodness-of-Fit (AGFI)	.877
Parsimony Normed Fit Index (PNFI)	.858

A chi-square of 4482.171 with 1275 degrees of freedom, p-value of 0.000, was obtained. The following statistics indicate a good fit, as outlined by Schumaker and Lomax (2010), where GFI, AGFI, TLI, NFI CFI, and PNFI are all close to .90 or .95, RMR and SRMR are both lower than 1 and RMSEA is lower than 0.6 (Bentler, 1999). However, the following do not indicate a good fit: CMIN/df is not <3.

Again, due to the sample size (n = 1,468 after listwise deletion), other GOF indices than the chi-square are considered. (Gatignon, 2010; Hair et al., 2010; Hooper et al., 2008).

b) Validity and reliability for HPO Model 2 (2016)

Validity and reliability for HPO Model 2 (2016) are illustrated in Table 5.11:

Table 5.11

Validity and reliability for HPO Model 2 (2016)

	CR	AVE
JS	0,733	0,480
LS	0,969	0,742
KM_O	0,903	0,483
EC	0,891	0,732
KM_T	0,911	0,632
SF	0,873	0,535
CR	0,901	0,647
WE	0,803	0,580
EB	0,885	0,563

Composite reliability (CR) for HPO Model 2 (2016) indicated that all constructs are explained by their observed variables as they were above the recommended threshold of .70 (Hair et al., 2010). Convergent reliability (AVE) for JS and KM_O were slightly lower than the recommended .50 (Hair et al., 2010) however, as with HPO Model 1 (2016), it was evaluated as only marginal and the constructs were retained.

c) Correlations for HPO Model 2 (2016)

Correlations for HPO Model 2 (2016) are illustrated in Table 5.12:

Table 5.12

Correlations for HPO Model 2 (2016)

			Estimate
LS	<-->	KM_O	0.509
LS	<-->	EC	0.419
LS	<-->	KM_T	0.498
LS	<-->	SF	0.44
LS	<-->	CR	0.448
LS	<-->	WE	0.328
LS	<-->	JS	0.589
LS	<-->	EB	0.321
KM_O	<-->	EC	0.579
KM_O	<-->	KM_T	0.56
KM_O	<-->	SF	0.729
KM_O	<-->	CR	0.723
KM_O	<-->	WE	0.584
KM_O	<-->	JS	0.626
KM_O	<-->	EB	0.691
EC	<-->	KM_T	0.385
EC	<-->	SF	0.715
EC	<-->	CR	0.508
EC	<-->	WE	0.453
EC	<-->	JS	0.557
EC	<-->	EB	0.677
KM_T	<-->	SF	0.353
KM_T	<-->	CR	0.4
KM_T	<-->	WE	0.32
KM_T	<-->	JS	0.568
KM_T	<-->	EB	0.412
SF	<-->	CR	0.675
SF	<-->	WE	0.515
SF	<-->	JS	0.531
SF	<-->	EB	0.712
CR	<-->	WE	0.586
CR	<-->	JS	0.493
CR	<-->	EB	0.619
WE	<-->	JS	0.493
WE	<-->	EB	0.624
JS	<-->	EB	0.544

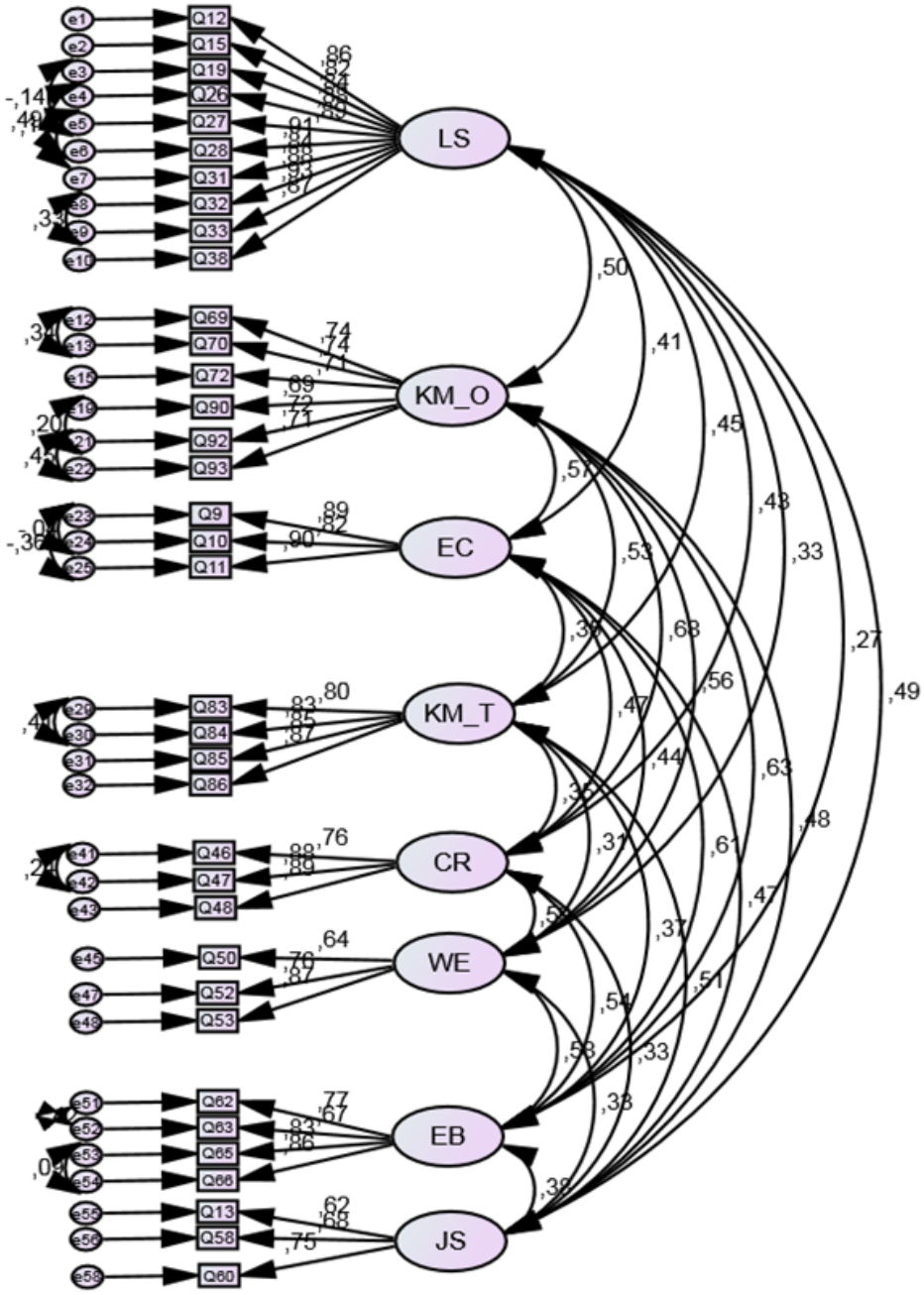
Linear correlations (dependence) existed between LS and KM_O and LS and JS. There were correlations between KM_O and seven of the nine the constructs, similar to the HPO Model 1 (2016) correlations, namely EC, KM_T, SF, CR, WE, JS, and EB. Furthermore, correlations existed between EC and SF, CR, JS and EB. KM_T and JS also indicated correlation. SF indicated correlations with CR, WE, JS and EB while CR indicated correlations with, WE and EB. Lastly, WE indicated correlation with EB as well as JS with EB.

5.4.2.3 Reporting on CFA for HPO Model 3 (2016)

a) Model fit statistics for HPO Model 3 (2016)

HPO Model 3 (2016) is the measurement model after 16 items which did not load on factor analysis were removed (i.e. items 29, 30, 34, 36, 37, 39, 42, 43, 45, 49, 71, 73, 75, 77, 87, and 88).

Figure 5.4 illustrates the HPO model referred to as Model 3, followed by the model fit statistics in Table 5.13.



Note:

Direct causal relationship =

Correlations between variables =

Error between actual and predicted value

Figure 5.4. High Performance Model 3 (2016)

Table 5.13

Goodness-of-fit indices for HPO Model 3 (2016)

Indices	Value
Absolute Fit Indices	
Chi-squire (CMIN)	1684.361
Chi-square degrees of freedom (d)	553
P-value	0.000
Minimum discrepancy divided by its degrees of freedom (CMIN/df)	3.046
Goodness-of-Fit Index (GFI)	.939
Root Mean Square Error of Approximation (RMSEA)	.037
Root Mean Square Residual (RMR)	.057
Standardized Root Mean Residual (SRMR)	.0323
Incremental Fit Indices	
Normed Fit Index (NFI)	.960
Tucker Lewis Index (TLI)	.969
Comparative Fit Index (CFI)	.973
Parsimony Fit Indices	
Adjusted Goodness-of-Fit (AGFI)	.927
Parsimony Normed Fit Index (PNFI)	.843

A chi-square of 1684.361 with 553 degrees of freedom, p-value of 0.000, was obtained. The following statistics indicate a good fit, as outlined by Schumaker and Lomax (2010), where, GFI and AGFI, are close to .90 or .95, RMR and SRMR are both lower than 1 and RMSEA is lower than 0.6 (Bentler, 1999). However, the following do not indicate a good fit: CMIN/df is not <3, TLI, NFI CFI and PNFI are not close to .90 or .95.

Again, due to the sample size (n = 1,468 after listwise deletion), other GOF indices than the chi-square is considered (Gatignon, 2010; Hair et al., 2010; Hooper et al., 2008).

From the discussion of the various models, the researcher concludes that Model 2 (2016) appears to be more reliable, pragmatic, and stable. Model 1 has one index that

does not indicate a good fit: CMIN/df while Model 3 has several indices which do not indicate a good fit, that is CMIN/df, TLI, NFI CFI and PNFI.

b) Validity and reliability for HPO Model 3 (2016)

Validity and reliability for HPO Model 3 (2016) are illustrated in Table 5.14:

Table 5.14

Validity and reliability for HPO Model 3 (2016)

	CR	AVE
JS	0,726	0,470
LS	0,970	0,762
KM_O	0,864	0,515
EC	0,905	0,761
KM_T	0,903	0,701
SF	0,881	0,712
CR	0,803	0,580
WE	0,867	0,621
EB	0,726	0,470

Composite reliability (CR) for HPO Model 3 (2016) indicated that all constructs are explained by their observed variables as they were above the recommended threshold of .70 (Hair et al., 2010). Convergent reliability (AVE) for JS and EB were slightly lower than the recommended .50 (Hair et al., 2010) however, it was evaluated as only marginal and the constructs were retained.

c) Correlations for HPO Model 3 (2016)

Correlations for HPO Model 3 (2016) are illustrated in Table 5.15:

Table 5.15

Correlations for HPO Model 3 (2016)

			Estimate
LS	<-->	KM_O	0.5
LS	<-->	EC	0.41
LS	<-->	KM_T	0.451
LS	<-->	CR	0.43
LS	<-->	WE	0.325
LS	<-->	JS	0.487
LS	<-->	EB	0.272
KM_O	<-->	EC	0.569
KM_O	<-->	KM_T	0.532
KM_O	<-->	CR	0.683
KM_O	<-->	WE	0.563
KM_O	<-->	JS	0.483
KM_O	<-->	EB	0.627
EC	<-->	KM_T	0.355
EC	<-->	CR	0.471
EC	<-->	WE	0.443
EC	<-->	JS	0.473
EC	<-->	EB	0.61
KM_T	<-->	CR	0.354
KM_T	<-->	WE	0.305
KM_T	<-->	JS	0.508
KM_T	<-->	EB	0.366
CR	<-->	WE	0.587
CR	<-->	JS	0.328
CR	<-->	EB	0.54
WE	<-->	JS	0.332
WE	<-->	EB	0.578
JS	<-->	EB	0.375

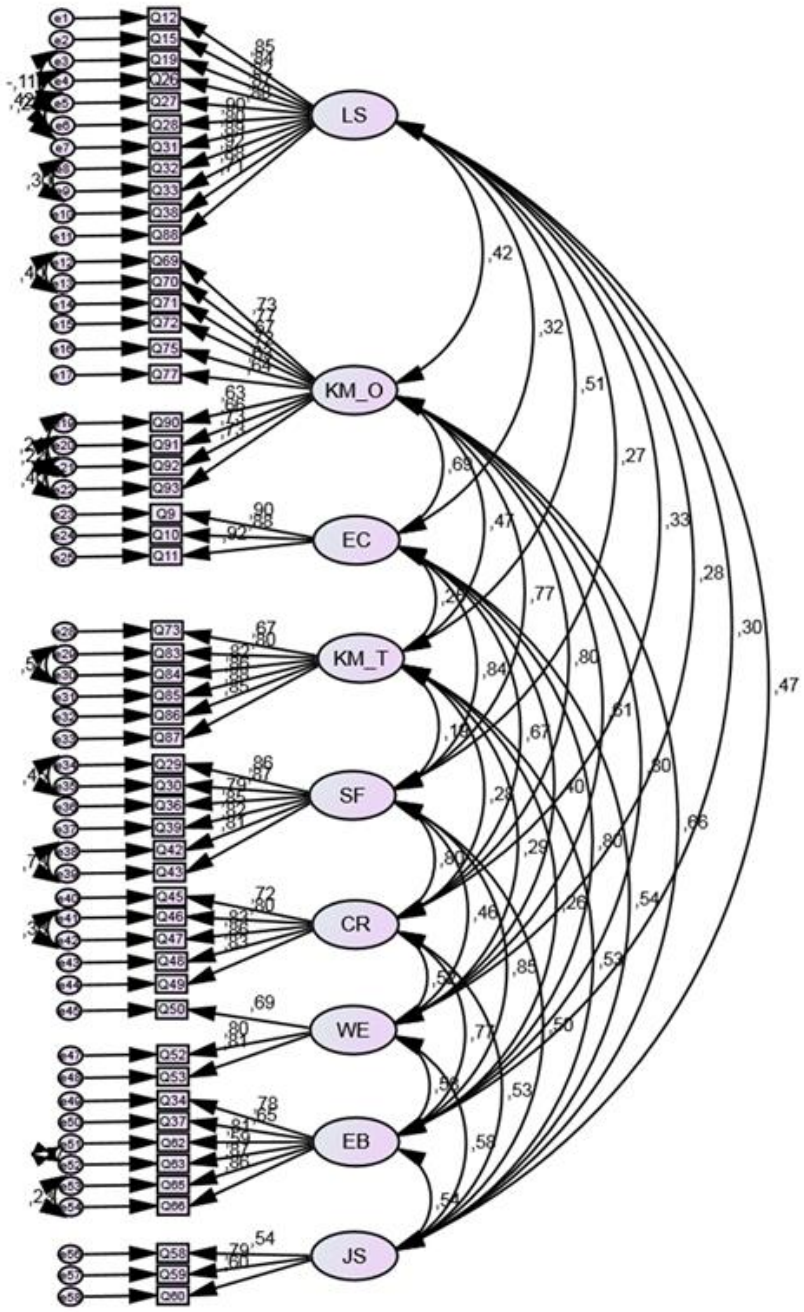
Linear correlations (dependence) existed between LS and KM_O. There were correlations between KM_O and five of the nine the constructs, namely, EC, KM_T, CR, WE, and EB. Furthermore, correlations existed between EC and EB. KM_T, and JS also indicated correlation. CR indicated correlation with EB. Lastly, WE indicated correlation with EB.

The researcher took one step further to determine Model 2's consistency across the respective years the study ran, that is 2012 and 2014.

5.4.2.4 Reporting on CFA for HPO Model 2 based on 2012 data

a) Model fit Model fit statistics HPO Model 2 (2012)

To determine Model 2's consistency, the researcher compared the model to the 2012 data. Figure 5.5 illustrates the HPO Model 2 based on 2012 data, followed by the model fit statistics in Table 5.16.



Note:

Direct causal relationship =

Correlations between variables =

Error between actual and predicted value

Figure 5.5. High Performance Model 2 based on 2012 data

Table 5.16.

Goodness-of-fit indices for HPO Model 2 (2012)

Indices	Value
Absolute Fit Indices	
Chi-squire (CMIN)	3322.74
Chi-square degrees of freedom (d)	1275
P-value	0.000
Minimum discrepancy divided by its degrees of freedom (CMIN/df)	2.606
Goodness-of-Fit Index (GFI)	.847
Root Mean Square Error of Approximation (RMSEA)	.047
Root Mean Square Residual (RMR)	.067
Standardized Root Mean Residual (SRMR)	.0497
Incremental Fit Indices	
Normed Fit Index (NFI)	.896
Tucker Lewis Index (TLI)	.928
Comparative Fit Index (CFI)	.933
Parsimony Fit Indices	
Adjusted Goodness-of-Fit (AGFI)	.829
Parsimony Normed Fit Index (PNFI)	.829

A chi-square of 3322.74 with 1275 degrees of freedom, p-value of 0.000, was obtained. The following statistics indicate a good fit, as outlined by Schumaker and Lomax (2010), where, CMIN/df is <3, RMSEA is below 0.6, TLI, NFI CFI and AGFI, are close to .90 or .95 and RMR and SRMR are both lower than 1. However, the following statistics do not indicate a good fit: GFI and PNFI are not close to .90 or .95.

b) Validity and reliability for HPO Model 2 (2012)

Validity and reliability for HPO Model 2 (2012) are illustrated in Table 5.17:

Table 5.17

Validity and reliability for HPO Model 2 (2012)

	CR	AVE
JS	0,685	0,427
LS	0,967	0,726
KM_O	0,901	0,478
EC	0,929	0,813
KM_T	0,922	0,665
SF	0,933	0,698
CR	0,904	0,654
WE	0,811	0,590
EB	0,893	0,586

Composite reliability (CR) for HPO Model 2 (2012) indicated that most constructs are explained by their observed variables as they were above the recommended threshold of .70 (Hair et al., 2010), expect for JS. However, it was evaluated as marginal. Convergent reliability (AVE) for JS and KM_O were slightly lower than the recommended .50 (Hair et al., 2010) however, it was evaluated as only marginal and the constructs were retained.

c) Correlations for HPO Model 2 (2012)

Correlations for HPO Model 2 (2012) are illustrated in Table 5.18:

Table 5.18

Correlations for HPO Model 2 (2012)

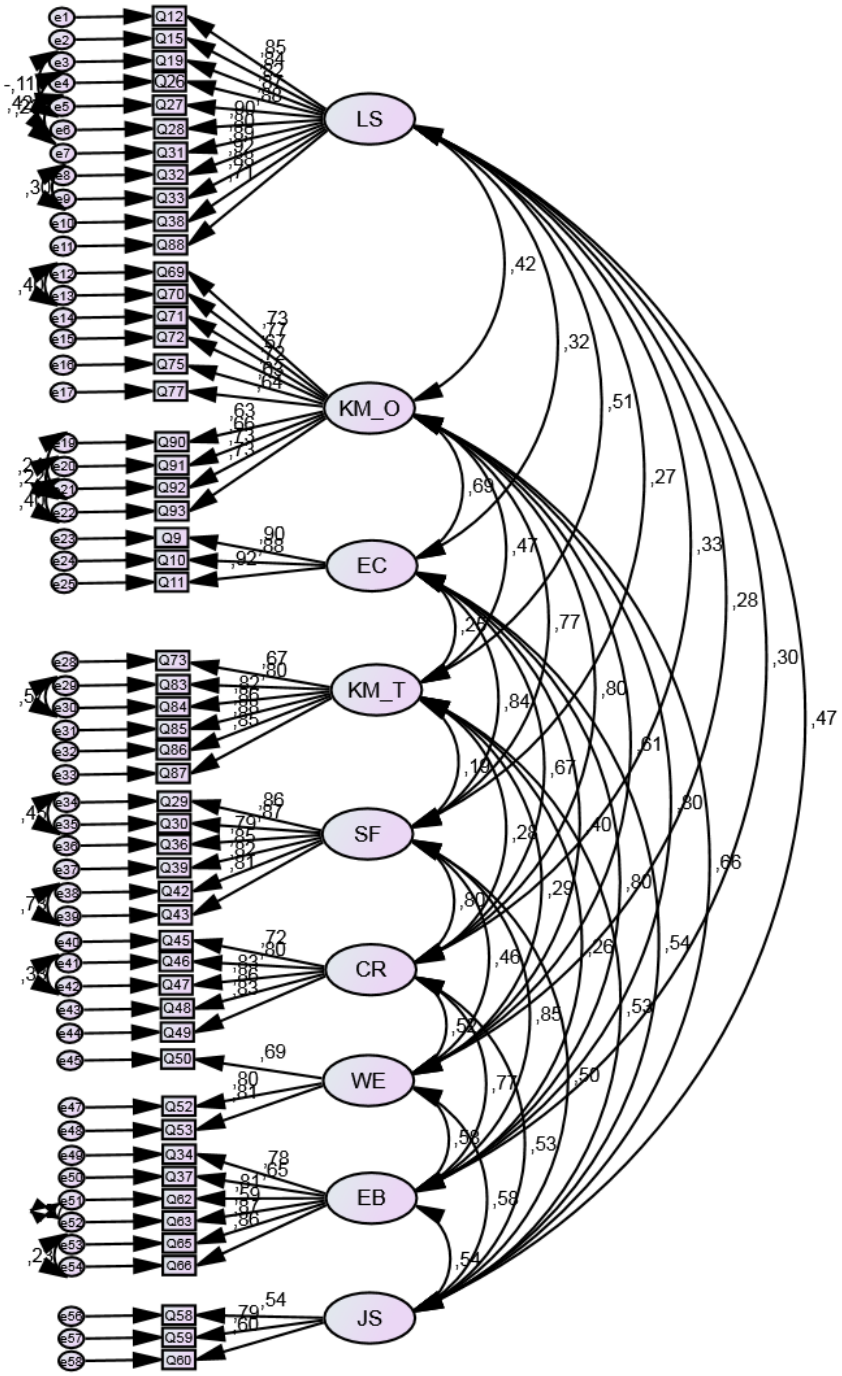
			Estimate
LS	<-->	KM_O	0.423
LS	<-->	EC	0.317
LS	<-->	KM_T	0.506
LS	<-->	SF	0.274
LS	<-->	CR	0.325
LS	<-->	WE	0.284
LS	<-->	JS	0.474
LS	<-->	EB	0.298
KM_O	<-->	EC	0.695
KM_O	<-->	KM_T	0.468
KM_O	<-->	SF	0.774
KM_O	<-->	CR	0.804
KM_O	<-->	WE	0.613
KM_O	<-->	JS	0.664
KM_O	<-->	EB	0.796
EC	<-->	KM_T	0.251
EC	<-->	SF	0.837
EC	<-->	CR	0.671
EC	<-->	WE	0.397
EC	<-->	JS	0.54
EC	<-->	EB	0.8
KM_T	<-->	SF	0.186
KM_T	<-->	CR	0.28
KM_T	<-->	WE	0.288
KM_T	<-->	JS	0.529
KM_T	<-->	EB	0.26
SF	<-->	CR	0.803
SF	<-->	WE	0.459
SF	<-->	JS	0.504
SF	<-->	EB	0.851
CR	<-->	WE	0.518
CR	<-->	JS	0.534
CR	<-->	EB	0.765
WE	<-->	JS	0.58
WE	<-->	EB	0.582
JS	<-->	EB	0.541

Linear correlations (dependence) existed between LS and KM_T. There were correlations between KM_O and six of the nine the constructs, namely EC, SF, CR, WE, JS, and EB. Furthermore, correlations existed between EC and SF, CR, JS, and EB. KM_T and JS also indicated correlation. SF correlated with CR, JS and EB, while CR indicated correlations with, WE, JS, and EB. Lastly, WE indicated correlation with JS and EB.

5.4.2.5 Reporting on CFA for HPO Model 2 based on 2014 data

a) Model fit statistics for HPO Model 2 (2014)

To determine HPO Model 2's consistency, the researcher compared the model to the 2014 data. Figure 5.6 illustrates the HPO Model 2 based on 2014 data, followed by the model fit statistics in Table 5.19.



Note:

Direct causal relationship =

Correlations between variables =

Error between actual and predicted value

Figure 5.6. High Performance Model 2 (2014)

Table 5.19

Goodness-of-fit indices for HPO Model 2 (2014)

Indices	Value
Absolute Fit Indices	
Chi-squire (CMIN)	4348.44
Chi-square degrees of freedom (d)	1275
P-value	0.000
Minimum discrepancy divided by its degrees of freedom (CMIN/df)	3.411
Goodness-of-Fit Index (GFI)	.860
Root Mean Square Error of Approximation (RMSEA)	.046
Root Mean Square Residual (RMR)	.080
Standardized Root Mean Residual (SRMR)	.0554
Incremental Fit Indices	
Normed Fit Index (NFI)	.917
Tucker Lewis Index (TLI)	.935
Comparative Fit Index (CFI)	.940
Parsimony Fit Indices	
Adjusted Goodness-of-Fit (AGFI)	.843
Parsimony Normed Fit Index (PNFI)	.849

A chi-square of 4348.44 with 1275 degrees of freedom, p-value of 0.000, was obtained. The following statistics indicate a good fit, as outlined by Schumaker and Lomax (2010), where, RMSEA is below 0.6, GFI, PNFI, TLI, NFI, CFI, and AGFI, are close to .90 or .95 and RMR and SRMR are both lower than 1. However, the following statistics do not indicate a good fit: CMIN/df is not <3, GFI and PNFI are not close to .90 or .95.

a) Validity and reliability for HPO Model 2 (2014)

Validity and reliability for HPO Model 2 (2014) are illustrated in Table 5.20:

Table 5.20

Validity and reliability for HPO Model 2 (2014)

	CR	AVE
JS	0,702	0,447
LS	0,969	0,742
KM_O	0,894	0,460
EC	0,889	0,728
KM_T	0,913	0,637
SF	0,872	0,534
CR	0,902	0,649
WE	0,831	0,622
EB	0,885	0,564

Composite reliability (CR) for HPO Model 2 (2014) indicated that all constructs are explained by their observed variables as they were above the recommended threshold of .70 (Hair et al., 2010). Convergent reliability (AVE) for JS and KM_O were slightly lower than the recommended .50 (Hair et al., 2010) however, it was evaluated as only marginal and the constructs were retained.

b) Correlations for HPO Model 2 (2014)

Correlations for HPO Model 2 (2014) are illustrated in Table 5.21:

Table 5.21

Correlations for HPO Model 2 (2014)

			Estimate
LS	<-->	KM_O	0.571
LS	<-->	EC	0.474
LS	<-->	KM_T	0.522
LS	<-->	SF	0.439
LS	<-->	CR	0.495
LS	<-->	WE	0.33

			Estimate
LS	<-->	JS	0.603
LS	<-->	EB	0.326
KM_O	<-->	EC	0.64
KM_O	<-->	KM_T	0.55
KM_O	<-->	SF	0.75
KM_O	<-->	CR	0.728
KM_O	<-->	WE	0.64
KM_O	<-->	JS	0.737
KM_O	<-->	EB	0.691
EC	<-->	KM_T	0.394
EC	<-->	SF	0.722
EC	<-->	CR	0.566
EC	<-->	WE	0.473
EC	<-->	JS	0.607
EC	<-->	EB	0.732
KM_T	<-->	SF	0.366
KM_T	<-->	CR	0.313
KM_T	<-->	WE	0.244
KM_T	<-->	JS	0.563
KM_T	<-->	EB	0.353
SF	<-->	CR	0.732
SF	<-->	WE	0.568
SF	<-->	JS	0.567
SF	<-->	EB	0.818
CR	<-->	WE	0.628
CR	<-->	JS	0.598
CR	<-->	EB	0.636
WE	<-->	JS	0.525
WE	<-->	EB	0.561
JS	<-->	EB	0.584

Linear correlations (dependence) existed between LS and KM_O, KM_T and JS. There were correlations between KM_O and seven of the nine the constructs, namely, EC, KM_T, SF, CR, WE, JS, and EB. Furthermore, correlations existed between EC and SF, CR, JS, and EB. KM_T and JS also indicated correlation. SF correlated with CR, WE, JS, and EB, while CR indicated correlations with, WE, JS, and EB. Lastly, WE indicated correlation with JS and EB.

5.4.2.6 Summary discussion on HPO Model 2 for the respective years

Table 5.22 compares the goodness-of-fit indices for HPO Model 2 for 2012, 2014 and 2016 respectively, to determine whether the models changed or stayed consistent over the six years.

Table 5.22

Goodness-of-Fit Indices for HPO Model 2 for 2012, 2014 and 2016

	HPO Model 2 (2012)	HPO Model 2 (2014)	HPO Model 2 (2016)
Indices	**Value**	**Value**	**Value**
Absolute Fit Indices			
Chi-squire (CMIN)	3322.74	4348.44	4482.171
Chi-square degrees of freedom (d)	1275	1275	1275
P-value	0	0	0
Minimum discrepancy divided by its degrees of freedom (CMIN/df)	2.606	3.411	3.515
Goodness-of-Fit Index (GFI)	.847	.860	.890
Root Mean Square Error of Approximation (RMSEA)	.047	.046	.041
Root Mean Square Residual (RMR)	.067	.080	.057
Standardized Root Mean Residual (SRMR)	.0497	.0554	.0454
Incremental Fit Indices			
Normed Fit Index (NFI)	.896	.917	.927
Tucker Lewis Index (TLI)	.928	.935	.942
Comparative Fit Index (CFI)	.933	.940	.947
Parsimony Fit Indices			
Adjusted Goodness-of-Fit (AGFI)	.829	.843	.877
Parsimony Normed Fit Index (PNFI)	.829	.849	.858

When comparing the results of the fit indices, it appears that HPO Model 2 (2016) is statistically reliable, pragmatic and stable, even when compared to other years 2012 and 2014, as the values do not significantly differ from one year to the next. The researcher therefore concluded that HPO Model 2 stayed the most consistent over the six years of study, as discussed under section 5.3.2.3.

The following section describes the third step which is descriptive and correlation analysis.

5.5 STEP 3: DESCRIPTIVE ANALYSIS AND CORRELATION ANALYSIS

5.5.1 Reporting of means and standard deviations

The descriptive information on each of the HPO dimensions will be provided in the next section. Table 5.23 provides the descriptive statistics that constitutes the mean, standard deviation, minimum and maximum scores for each of the dimensions.

Table 5.23

Descriptive statistics for the HPO dimensions (2016)

Factor	Mean (M)	Standard deviation (SD)	Minimum	Maximum
Leadership	3,40	1.085	1.00	5.00
Knowledge Management - organisation	2,95	0.784	1.00	5.00
Employer of Choice	3,30	1.018	1.00	5.00
Knowledge Management - team	3,65	0.875	1.00	5.00
Strategic Focus	3,22	0.835	1.00	5.00
Change and Renewal	2,85	0.913	1.00	5.00
Work Environment	2,77	1.047	1.00	5.00
Employer Brand	2,79	0.917	1.00	5.00
Job Satisfaction	3,52	0.931	1.00	5.00

The mean scores ranged from 2.77 to 3.65 for the various dimensions. The highest scoring dimension was Knowledge Management – team (M = 3.65; SD = .875), while the lowest scoring dimension was Work Environment (M = 2.77; SD = 1.047). The standard deviations of the dimensions were similar, ranging from .835 to 1.085. Martins and Geldenhuys (2016) stated that according to the HSRC, a mean score below the threshold of 3.2 is considered developmental (i.e. does not contribute to high performance), while a mean score above 3.2 is

considered positive (i.e. the factors contribute to high performance). In light of this, the threshold mean of 3.2 was used to interpret the mean results for the HPO dimensions.

Knowledge Management – organisation, Employer of Choice, Change and Renewal, Work Environment, and Employer Brand all had mean scores below 3.2, which suggests that employees believed these factors need to be developed to obtain high performance. Higher mean scores (above 3.2) were obtained for Leadership, Knowledge Management – team, Strategic Focus as well as for Job Satisfaction. The latter indicates that employees believed these factors were on par in terms of high performance.

5.5.2 Reporting of the Pearson product moment correlation coefficients between variables (2016 data)

The inter-relationships between the variables were calculated using Pearson's product moment correlations, considering the data is parametric. In this way, the researcher was able to identify the direction and strength of the linear relationship between each of the variables. The value of the coefficient can range from -1.00 to 1.00. This value indicates the strength of the relationship between the variables. A correlation of 0 indicates no relationship, 1.0 indicates a perfect positive correlation and a value of -1.0 indicates a perfect negative relationship (Pallant, 2011). Cohen (1988) suggested the following guidelines when interpreting correlations:

Table 5.24

Interpretation of correlations (Cohen, 1988)

Pearson product-moment correlation	Effect size
r = .10 to .29	Small practical effect
r = .30 to .49	Medium practical effect
r = .50 to 1.0	Large practical effect

Table 5.25 summarises the small, medium, and large practical significant constructs in relation to this study. See Annexure 12 for more detailed results.

Table 5.25

Summary of Pearson's correlation of medium to large practically significant constructs (n = 1,468)

Construct	Relationship Construct	r Score	Sig. (2-tailed)	n	Effect Size (Cohen)
Leadership (LS)	LS	1		1468	
	KM_O	.481**	0.000	1468	Medium
	EC	.393**	0.000	1468	Medium
	KM_T	.488**	0.000	1468	Medium
	SF	.389**	0.000	1468	Medium
	CR	.440**	0.000	1468	Medium
	WE	.283**	0.000	1468	Small
	EB	.305**	0.000	1468	Medium
	JS	.488**	0.000	1468	Medium
Knowledge Management – organisation (KM_O)	LS	.481**	0.000	1468	Medium
	KM_O	1		1468	
	EC	.515**	0.000	1468	Large
	KM_T	.517**	0.000	1468	Large
	SF	.621**	0.000	1468	Large
	CR	.657**	0.000	1468	Large
	WE	.487**	0.000	1468	Medium
	EB	.604**	0.000	1468	Large
	JS	.486**	0.000	1468	Medium
Employer of Choice (EC)	LS	.393**	0.000	1468	Medium
	KM_O	.515**	0.000	1468	Large
	EC	1		1468	
	KM_T	.353**	0.000	1468	Medium
	SF	.616**	0.000	1468	Large
	CR	.458**	0.000	1468	Medium
	WE	.370**	0.000	1468	Medium
	EB	.583**	0.000	1468	Large
	JS	.436**	0.000	1468	Medium
Knowledge Management – team (KM_T)	LS	.488**	0.000	1468	Medium
	KM_O	.517**	0.000	1468	Large
	EC	.353**	0.000	1468	Medium
	KM_T	1		1468	

Construct	Relationship Construct	r Score	Sig. (2-tailed)	n	Effect Size (Cohen)
	SF	.312**	0.000	1468	Medium
	CR	.378**	0.000	1468	Medium
	WE	.264**	0.000	1468	Small
	EB	.385**	0.000	1468	Medium
	JS	.482**	0.000	1468	Medium
Strategic Focus (SF)	LS	.398**	0.000	1468	Medium
	KM_O	.621**	0.000	1468	Large
	EC	.616**	0.000	1468	Large
	KM_T	.312**	0.000	1468	Medium
	SF	1		1468	
	CR	.601**	0.000	1468	Large
	WE	.407**	0.000	1468	Medium
	EB	.584**	0.000	1468	Large
	JS	.396**	0.000	1468	Medium
Change and Renewal (CR)	LS	.440**	0.000	1468	Medium
	KM_O	.657**	0.000	1468	Large
	EC	.458**	0.000	1468	Medium
	KM_T	.378**	0.000	1468	Medium
	SF	.601**	0.000	1468	Large
	CR	1		1468	
	WE	.484**	0.000	1468	Medium
	EB	.538**	0.000	1468	Large
	JS	.391**	0.000	1468	Medium
Work Environment (WE)	LS	.283**	0.000	1468	Small
	KM_O	.487**	0.000	1468	Medium
	EC	.370**	0.000	1468	Medium
	KM_T	.264**	0.000	1468	Small
	SF	.407**	0.000	1468	Medium
	CR	.484**	0.000	1468	Medium
	WE	1		1468	
	EB	.501**	0.000	1468	Large
	JS	.334**	0.000	1468	Medium
Employer Brand (EB)	LS	.305**	0.000	1468	Medium
	KM_O	.604**	0.000	1468	Large
	EC	.583**	0.000	1468	Large
	KM_T	.385**	0.000	1468	Medium
	SF	.584**	0.000	1468	Large
	CR	.538**	0.000	1468	Large
	WE	.501**	0.000	1468	Large
	EB	1		1468	
	JS	.423**	0.000	1468	Medium

Construct	Relationship Construct	r Score	Sig. (2-tailed)	n	Effect Size (Cohen)
Job Satisfaction (JS)	LS	.488**	0.000	1468	Medium
	KM_O	.486**	0.000	1468	Medium
	EC	.436**	0.000	1468	Medium
	KM_T	.482**	0.000	1468	Medium
	SF	.396**	0.000	1468	Medium
	CR	.391**	0.000	1468	Medium
	WE	.334**	0.000	1468	Medium
	EB	.423**	0.000	1468	Medium
	JS	1		1468	
**. Correlation is significant at the 0.01 level (2-tailed). *. Correlation is significant at the 0.05 level (2-tailed).					

The data in Table 5.25 indicates small, medium, and strong significant differences, however only the following strong significant differences are highlighted:

- Strong relationships exist between:
    - Knowledge Management – organisation (KM_O) and Employer of Choice (EC).
    - Knowledge Management – organisation (KM_O) and Knowledge Management – team (KM_T).
    - Knowledge Management – organisation (KM_O) and Strategic Focus (SF).
    - Knowledge Management – organisation (KM_O) and Change and Renewal (CR).
    - Knowledge Management – organisation (KM_O) and Employer Brand (EB).
    - Employer of Choice (EC) and Strategic Focus (SF).
    - Employer of Choice (EC) and Employer Brand (EB).
    - Strategic Focus (SF) and Change and Renewal (CR).
    - Strategic Focus (SF) and Employer Brand (EB).
    - Change and Renewal (CR) and Employer Brand (EB).
    - Work Environment (WE) and Employer Brand (EB).

Knowledge Management – organisation has a strong relationship with Employer of Choice, Knowledge Management – team, Strategic Focus, Change and Renewal as well as with Employer Brand. Strategic Focus and Change and Renewal have a strong relationship. Strong relationships exist between Employer of Choice and Strategic Focus, as well as between Employer of Choice and Employer Brand. Finally, Employer Brand has strong relationships with Strategic Focus, Change and Renewal, and Work Environment.

5.6 STEP 4: TESTING FOR SIGNIFICANT DIFFERENCES BETWEEN GROUPS

The results for group differences are discussed in this section. One-way (ANOVA) tests were used to analyse group differences based on years of work, age, race, gender, and job level to determine whether significant difference exist.

5.6.1 Tests for group mean differences – years of work

Table 5.26 provides the results of the One-way (ANOVA) that was conducted to test for group differences in terms of years of work. The results are discussed thereafter.

Table 5.26

Results of One way (ANOVA) for group differences in terms of years of work

		Sum of Squares	df	Mean Square	F	Sig.
LS	Between Groups	37,609	5	7,522	6,531	0,000*
	Within Groups	1679,197	1458	1,152		
	Total	1716,806	1463			
KM_O	Between Groups	24,144	5	4,829	8,038	0,000*
	Within Groups	875,858	1458	0,601		
	Total	900,003	1463			
EC	Between Groups	19,169	5	3,834	3,752	0,002*
	Within Groups	1489,945	1458	1,022		
	Total	1509,115	1463			
KM_T	Between Groups	12,879	5	2,576	3,414	0,005*

		Sum of Squares	df	Mean Square	F	Sig.
	Within Groups	1099,870	1458	0,754		
	Total	1112,749	1463			
SF	Between Groups	55,746	5	11,149	16,830	0,000*
	Within Groups	965,855	1458	0,662		
	Total	1021,601	1463			
CR	Between Groups	30,073	5	6,015	7,380	0,000*
	Within Groups	1188,298	1458	0,815		
	Total	1218,371	1463			
WE	Between Groups	13,781	5	2,756	2,524	0,028*
	Within Groups	1592,183	1458	1,092		
	Total	1605,963	1463			
EB	Between Groups	30,507	5	6,101	7,417	0,000*
	Within Groups	1199,364	1458	0,823		
	Total	1229,871	1463			
JS	Between Groups	25,116	5	5,023	5,918	0,000*
	Within Groups	1237,522	1458	0,849		
	Total	1262,637	1463			
*Significant difference.						

The Sig. level for all constructs are less than .05, therefore the researcher concludes that there is significant difference for all constructs between years of service groups (i.e. 0 to 2 years, 3 to 5 years, 6 to 10 years, 11 to 20 years, 21 to 30 years and 31+ years).

The post hoc results and mean scores (see annexure 13 – Bonferroni test) indicate that respondents with years of service between 0 to 2 years (M = 3.66) obtained significantly higher mean scores for Leadership than respondents with years of service between 3 to 5 years (M = 3.20), 6 to 10 years (M = 3.30) and 11 to 20 years (M = 3.29). For Knowledge Management – organisation, respondents with years of service between 0 to 2 years (M = 3.16) obtained significantly higher mean scores than respondents with years of service between 3 to 5 years (M = 2.83), 6 to 10 years (M = 2.85) and 11 to 20 years (M = 2.88). Respondents with years of service between 0 to 2 years (M = 3.53) obtained significantly higher mean scores for Employer of Choice than respondents with years of service between 6 to 10 years (M = 3.22), 11 to 20 years (M = 3.27) and 21 to 30 years (M = 3.25). For Knowledge Management – team, respondents with years of service between 21 to 30 years

(M = 3.79) obtained significantly higher mean scores than respondents with years of service between 3 to 5 years (M = 3.51) and 6 to 10 years (M =3.57).

Respondents with years of service between 0 to 2 years (M = 3.57) obtained significantly higher mean scores for Strategic Focus than respondents with years of service between 3 to 5 years (M = 3.30), 6 to 10 years (M = 3.18), 11 to 20 years (M = 3.04), 21 to 30 years (M = 3.08) and 31+ years (M = 3.10). Significantly higher mean scores were also obtained for respondents with years of service between 3 to 5 years (M = 3.30) and 11 to 20 years (M = 3.04) for Strategic Focus. Respondents with years of service between 0 to 2 years (M = 3.11) obtained significantly higher mean scores for Change and Renewal than respondents with years of service between 6 to 10 years (M = 2.77), 11 to 20 years (M = 2.73) and 21 to 30 years (M = 2.79). Respondents with years of service between 0 to 2 years (M = 3.05) obtained significantly higher mean scores for Employer Brand than respondents with years of service between 6 to 10 years (M = 2.74), 11 to 20 years (M = 2.66) and 21 to 30 years (M = 2.68). For Job Satisfaction, respondents with years of service between 0 to 2 years (M = 3.60) obtained significantly higher mean scores than respondents with years of service between 3 to 5 years (M = 3.32). Respondents with years of service between 21 to 30 years (M = 3.70) obtained significantly higher scores than the 3 to 5 years (M = 3.32) and 6 to 10 years (M = 3.40) respectively, as well as the 31+ years (M = 3.80) who obtained significantly higher scores than the 3 to 5 years (M = 3.32) and 6 to 10 years (M = 3.40) respectively. No significant differences were observed between the various years of service groups regarding Work Environment.

5.6.2 Tests for group mean differences – age

Table 5.27 provides the results of the One-way (ANOVA) that was conducted to test for group differences in terms of age, with the results discussed thereafter.

Table 5.27

Results of One-way (ANOVA) for group differences in terms of age

		Sum of Squares	df	Mean Square	F	Sig.
LS	Between Groups	2,442	2	1,221	1,037	0,355
	Within Groups	1718,147	1460	1,177		
	Total	1720,589	1462			
KM_O	Between Groups	7,504	2	3,752	6,142	0,002*
	Within Groups	891,916	1460	0,611		
	Total	899,421	1462			
EC	Between Groups	3,688	2	1,844	1,786	0,168
	Within Groups	1507,792	1460	1,033		
	Total	1511,480	1462			
KM_T	Between Groups	3,432	2	1,716	2,244	0,106
	Within Groups	1116,267	1460	0,765		
	Total	1119,699	1462			
SF	Between Groups	11,464	2	5,732	8,283	0,000*
	Within Groups	1010,271	1460	0,692		
	Total	1021,734	1462			
CR	Between Groups	6,589	2	3,294	3,969	0,019*
	Within Groups	1211,759	1460	0,830		
	Total	1218,348	1462			
WE	Between Groups	14,957	2	7,478	6,864	0,001*
	Within Groups	1590,692	1460	1,090		
	Total	1605,649	1462			
EB	Between Groups	21,507	2	10,753	13,005	0,000*
	Within Groups	1207,234	1460	0,827		
	Total	1228,741	1462			
JS	Between Groups	15,761	2	7,881	9,183	0,000*
	Within Groups	1252,955	1460	0,858		
	Total	1268,716	1462			
*Significant difference.						

Significant difference exists between age groups (i.e. born between 1978 and 2000, born between 1965 and 1977 and born between 1946 and 1964) on Knowledge Management – organisation, Strategic Focus, Change and Renewal, Work Environment, Employer Brand, and Job Satisfaction. There is no significant difference between age groups for Leadership, Employer of Choice and Knowledge Management – team.

The post hoc results and mean scores (see annexure 13 - Bonferroni test) indicate that respondents born between 1946 and 1964 (M = 3.07) obtained significantly higher mean scores for Knowledge Management - organisation than respondents born between 1965 and 1977 (M = 2.88). For Strategic Focus, significantly higher mean scores were obtained for respondents born between 1978 and 2000 (M = 3.33) and respondents born between 1965 and 1977 (M = 3.14) and born between 1946 and 1964 (M = 3.16) respectively. Respondents born between 1978 and 2000 (M = 2.92) obtained significantly higher mean scores for Change and Renewal than respondents with born between 1965 and 1977 (M = 2.77). For Work Environment, respondents born between 1946 and 1964 (M = 2.92) obtained significantly higher mean scores than respondents with born between 1965 and 1977 (M = 2.66). Respondents born between 1978 and 2000 (M = 2.94) obtained significantly higher mean scores for Employer Brand than respondents with born between 1965 and 1977 (M = 2.69) and born between 1946 and 1964 (M = 2.70) respectively. Finally, for Job Satisfaction respondents born between 1946 and 1964 (M = 3.70) obtained significantly higher mean scores than respondents with born between 1965 and 1977 (M = 3.52) and respondents born between 1978 and 2000 (M = 3.41). No significant differences were observed between the various age groups regarding Leadership, Employer of Choice, and Knowledge Management - team.

5.6.3 Tests for group mean differences – race

Table 5.28 provides the results of the One-way (ANOVA) that was conducted to test for group differences in terms of race, with the results discussed thereafter.

Table 5.28

Results of One-way (ANOVA) for group differences in terms of race

		Sum of Squares	df	Mean Square	F	Sig.
LS	Between Groups	9,144	3	3,048	2,601	0,051
	Within Groups	1711,910	1461	1,172		
	Total	1721,054	1464			
KM_O	Between Groups	3,704	3	1,235	2,012	0,110
	Within Groups	896,603	1461	0,614		
	Total	900,307	1464			
EC	Between Groups	15,774	3	5,258	5,131	0,002*
	Within Groups	1497,053	1461	1,025		
	Total	1512,826	1464			
KM_T	Between Groups	6,470	3	2,157	2,831	0,037*
	Within Groups	1112,992	1461	0,762		
	Total	1119,462	1464			
SF	Between Groups	46,880	3	15,627	23,461	0,000*
	Within Groups	973,141	1461	0,666		
	Total	1020,022	1464			
CR	Between Groups	14,964	3	4,988	6,059	0,000*
	Within Groups	1202,658	1461	0,823		
	Total	1217,622	1464			
WE	Between Groups	26,310	3	8,770	8,111	0,000*
	Within Groups	1579,745	1461	1,081		
	Total	1606,055	1464			
EB	Between Groups	42,242	3	14,081	17,325	0,000*
	Within Groups	1187,438	1461	0,813		
	Total	1229,681	1464			
JS	Between Groups	19,804	3	6,601	7,728	0,000*
	Within Groups	1248,002	1461	0,854		
	Total	1267,806	1464			
*Significant difference.						

The Sig. level for all constructs, except Leadership and Knowledge Management – organisation, is less than .05, therefore the researcher concludes that there is significant overall for all constructs (except Leadership and Knowledge Management – organisation) between race groups (i.e. African, Coloured, Indian and White).

The post hoc results and mean scores (see annexure 13 - Bonferroni test) indicate that African respondents (M = 3.38) obtained significantly higher mean scores for Employer of Choice than White respondents (M = 3.16). For Strategic Focus, significantly higher mean scores were obtained for African respondents (M = 3.37) than for Indian (M = 3.04) and White (M = 2.99) respondents, respectively. African respondents (M = 2.93) obtained significantly higher mean scores for Change and Renewal than White (M = 2.75) and Indian (M = 2.59) respondents, respectively. For Work Environment significantly higher mean scores were obtained for African respondents (M = 2.83) than Indian respondents (M = 2.11). Coloured respondents (M = 2.75) obtained significantly higher mean scores for Work Environment than Indian respondents (M = 2.11) and White respondents (M = 2.76) also obtained significantly higher mean scores for Work Environment than Indian respondents (M = 2.11). For Job Satisfaction, White respondents (M = 3.68) obtained significantly higher mean scores than African respondents (M = 3.43). No significant differences were observed between the various race groups regarding Leadership, Knowledge Management – organisation, Knowledge Management – team and Employer Brand.

5.6.4 Tests for group mean differences – gender

Table 5.29 provides the results of the Independent samples *t*-test that was conducted to test for group differences in terms of gender, with the results discussed thereafter.

Table 5.29

Results of independent samples t-test for group differences in terms of gender

		F	Sig.	*t*	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
LS	Equal variances assumed	1,003	0,317	2,138	1464	0,033	0,12090	0,05655	0,00997	0,23183
	Equal variances not assumed			2,138	1463,912	0,033	0,12090	0,05655	0,00997	0,23183
KM_O	Equal variances assumed	0,076	0,783	1,080	1464	0,281	0,04421	0,04096	-0,03612	0,12455
	Equal variances not assumed			1,080	1463,730	0,281	0,04421	0,04096	-0,03612	0,12455
EC	Equal variances assumed	0,114	0,735	1,266	1464	0,206	0,06723	0,05310	-0,03693	0,17139
	Equal variances not assumed			1,266	1463,995	0,206	0,06723	0,05310	-0,03693	0,17139
KM_T	Equal variances assumed	0,108	0,743	0,806	1464	0,421	0,03680	0,04568	-0,05279	0,12640
	Equal variances not assumed			0,806	1463,994	0,421	0,03680	0,04568	-0,05279	0,12640
SF	Equal variances	0,099	0,753	-0,366	1464	0,714	-0,01600	0,04365	-0,10162	0,06963

		F	Sig.	*t*	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
	assumed									
	Equal variances not assumed			-0,366	1463,512	0,714	-0,01600	0,04365	-0,10162	0,06963
CR	Equal variances assumed	3,345	0,068	-0,186	1464	0,852	-0,00887	0,04768	-0,10240	0,08465
	Equal variances not assumed			-0,186	1457,948	0,852	-0,00887	0,04767	-0,10239	0,08464
WE	Equal variances assumed	0,476	0,490	-0,926	1464	0,355	-0,05064	0,05469	-0,15793	0,05665
	Equal variances not assumed			-0,926	1463,653	0,355	-0,05064	0,05470	-0,15793	0,05665
EB	Equal variances assumed	0,106	0,745	0,795	1464	0,427	0,03808	0,04787	-0,05583	0,13199
	Equal variances not assumed			0,795	1463,869	0,427	0,03808	0,04787	-0,05583	0,13198
JS	Equal variances assumed	5,980	0,015*	3,655	1464	0,000	0,17694	0,04842	0,08197	0,27192
	Equal variances not assumed			3,655	1458,531	0,000	0,17694	0,04841	0,08198	0,27191

*Significant difference

Significant positive difference exists only for–Job Satisfaction between gender groups (i.e. Male and Female). All the other constructs do not have significant positive differences in terms of gender.

The independent samples *t*-test results and mean scores (see annexure 13 - Bonferroni test) indicate that male respondents (M = 3.61) obtained significantly higher mean scores for Job Satisfaction than female respondents (M = 3.43).

5.6.5 Tests for group mean differences – job level

Table 5.30 provides the results of the One-way (ANOVA) that was conducted to test for group differences in terms of job level, with the results discussed thereafter.

Table 5.30

Results of One-way (ANOVA) for group differences in terms of job level

		Sum of Squares	df	Mean Square	F	Sig.
LS	Between Groups	10,159	4	2,540	2,166	0,071
	Within Groups	1709,818	1458	1,173		
	Total	1719,977	1462			
KM_O	Between Groups	4,749	4	1,187	1,941	0,101
	Within Groups	891,945	1458	0,612		
	Total	896,694	1462			
EC	Between Groups	9,803	4	2,451	2,386	0,049*
	Within Groups	1497,693	1458	1,027		
	Total	1507,496	1462			
KM_T	Between Groups	3,191	4	0,798	1,048	0,381
	Within Groups	1109,317	1458	0,761		
	Total	1112,508	1462			
SF	Between Groups	12,753	4	3,188	4,629	0,001*
	Within Groups	1004,179	1458	0,689		
	Total	1016,932	1462			
CR	Between Groups	7,027	4	1,757	2,119	0,076
	Within Groups	1209,029	1458	0,829		

		Sum of Squares	df	Mean Square	F	Sig.
	Total	1216,057	1462			
WE	Between Groups	31,247	4	7,812	7,254	0,000*
	Within Groups	1570,134	1458	1,077		
	Total	1601,381	1462			
EB	Between Groups	108,880	4	27,220	35,532	0,000*
	Within Groups	1116,946	1458	0,766		
	Total	1225,826	1462			
JS	Between Groups	16,476	4	4,119	4,825	0,001*
	Within Groups	1244,757	1458	0,854		
	Total	1261,233	1462			
*Significant difference.						

Significant difference exists on Employer of Choice, Strategic Focus, Work Environment, Employer Brand, and Job Satisfaction between job levels (i.e. A1 - A3, B1 - B5, C1 - C5, D1 - D5 and E1 - E3). Leadership, Knowledge Management – organisation, Knowledge Management – team, and Change and Renewal do not have significant difference in terms of job level.

The post hoc results and mean scores (see annexure 13 - Bonferroni test) indicate that respondents on job level B1-B5 (M = 3.50) obtained significantly higher mean scores for Employer of Choice than respondents on job level D1-D5 (M = 3.23). For Strategic Focus respondents on job level B1-B5 (M = 3.38) obtained significantly higher mean scores than respondents on job level C1-C5 (M = 3.17). Respondents on job level E1-E3 (M = 3.72) obtained significantly higher mean scores for Strategic Focus than respondents on job level C1-C5 (M = 3.17) and D1-D5 (M = 3.21) respectively. Respondents on job level B1-B5 (M = 3.00) obtained significantly higher mean scores for Work Environment than respondents on job level D1-D5 (M = 2.64) and E1-E3 (M = 2.12) respectively. For Employer Brand, respondents on job level A1-A3 (M = 3.05) obtained significantly higher mean scores than respondents on job level D1-D5 (M = 2.47) and E1-E3 (M = 2.25) respectively. Respondents on job level B1-B5 (M = 3.30) obtained significantly higher mean scores for Employer Brand than respondents on job level C1-C5 (M = 2.89) and D1-D5 (M = 2.47) respectively. Respondents on job level C1-C5 (M = 2.89) obtained significantly higher mean scores for Employer Brand than respondents on job level D1-D5 (M = 2.47) and E1-35 (M = 2.25) respectively. For Job Satisfaction, respondents on job level D1-D5 (M = 3.66) obtained

significantly higher mean scores than respondents on job level C1-C5 (M =3.44). No significant differences were observed between the various job level groups regarding Leadership, Knowledge Management – organisation, Knowledge Management – team, and Change and Renewal.

5.7 INTEGRATION OF LITERATURE AND EMPIRICAL RESEARCH

The empirical findings of this study indicated that Knowledge Management – organisation, Employer of Choice, Change and Renewal, Work Environment, and Employer Brand all had mean scores below 3.2, which suggests that employees believed these factors need to be developed in order to obtain high performance. Higher mean scores (above 3.2) were obtained for Leadership, Knowledge Management – team, Strategic Focus as well as for Job Satisfaction. The latter indicates that employees believed these four factors were on par in terms of high performance.

Many researchers listed Leadership as part of high performance, Duques and Gaske (1997) referred to market leadership, Heller (1997) was of the opinion that leadership should be delegated without losing control or direction, Butteriss (1998) said that leadership assessment and development should be provided, Lawler et al. (1998) suggested that a democratic leadership approach is important, where employees are involved in decision making, Haeckel (1999) noted that the leadership role is the one accountable for translating apparent noise into meaning about how and to adapt the way the organisation adapts, Collins (2001) encouraged leaders that are self-effacing, quiet, reserved, and even shy – a blend of personal humility and professional will, Hammer (2001) suggested that inspirational leadership should be substituted for a formal structure, Mische (2001) believed that HPOs share five common strategic traits and qualities, irrespective of industry, age or size, one of which is leadership, Owen et al. (2001) suggested that senior leadership should engage in leadership practices that ae congruent with the vision, mission, values and strategies, Joyce et al. (2003) described secondary management practices, one of which is leadership that keep leaders and directors committed to the business, Holbeche (2005) stated that HPOs grow leadership and appropriate management and leadership underpins high performance, Beer (2009) referred to leaders who advocate and inquire are crucial to obtain high performance, Gupta (2011)

identified five organisational dimensions, one of which is culturally sensitive leadership, Cocks (2012) referred to teams of leaders who set up a reason for existence for the organisation and are available, egalitarian and supporting their people from close by, Akdemir et al. (2010) listed participative leadership as a characteristic of a HPO, De Waal (2010) demonstrated the value that good leadership plays in reaching high performance in the public sector. De Waal (2012) emphasised the importance of high quality management in high performance and believed managers of excellent organisations are honest, decisive, action-oriented, performance-oriented, effective, self-confident, and have a strong leadership style. Finally, Wolf (2015) described the important influence of leadership is sustaining organisational performance, especially in terms of the constancy of actions from all leadership levels in the organisation.

A high rating on Knowledge Management (team) is in line with Akdemir et al. (2010) who emphasised the importance of knowledge management as part of a high performance organisation. De Waal (2012) believed that organisational members should spend time on dialogue, knowledge exchange, and learning – the latter referring to knowledge management on a team level.

Referring to Strategic Focus, Volberda (1998) noted that HPOs need to change their strategic focus easily while developing and maintaining some strategic direction, and which can change their dominating norms and values as well as correct deviations from essential norms and values, Foster & Kaplan (2001) encourage design of the strategic planning process through dialogue and conversation. Mische (2001) referred to the importance of strategic renewal, Gupta (2011) suggested that strategic human resource management and strategic diversity management are important dimensions of high performance. Akdemir et al. (2010) referred to strategic change management as one of the characteristics of high performance. Finally, De Waal (2012) believed that an HPO has adopted a strategy that sets it clearly apart from other organisations.

Job Satisfaction obtaining a high score is in line with Blanchard (2007) who believed that high performing organisations are referred to a such as a result of continuously producing

outstanding results over time with the highest level of satisfaction and commitment to success.

5.8 RESEARCH HYPOTHESES

In this section, the answers of the research hypotheses for the study are summarised in Table 5.31.

Table 5.31

Summary of research hypotheses

Research hypotheses	Description	Hypotheses supported/rejected
H01	The HPO questionnaire is valid and reliable.	Accepted
Ha1	The HPO questionnaire is not valid or reliable.	Rejected
H02	The IT organisation's HPO model is valid and consistent.	Accepted
Ha2	The IT organisation's HPO model is not valid or consistent.	Rejected
H03	Changes relating to the HPO model took place between the first, second and third questionnaires.	Rejected
Ha3	No changes relating to the HPO model took place between the first, second and third questionnaires.	Accepted
H04	The biographical groups differ significantly in terms of construct levels of high performance.	Partially accepted
Ha4	There are no significant differences between the biographical groups.	Rejected

All the steps in the empirical investigation have now been completed and all the empirical research questions have been answered.

5.9 CHAPTER SUMMARY

In this chapter, the statistical results of the study were presented which included data cleaning and organising, scale development and model construction, descriptive analysis, and correlation analysis as well as group differences. Furthermore, the findings of the literature

review were integrated with the empirical research findings by interpreting the results. Supportive evidence was provided for the formulated research hypotheses through the results. Research aims were 1, 2, 3, 4, and 5 were achieved.

Chapter 6 discusses the conclusions, limitations, and recommendations for the research.

CHAPTER 6: CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

No research is ever quite complete. It is the glory of a good bit of work that it opens the way for something still better, and this repeatedly leads to its own eclipse – Mervin Gordon

6.1 INTRODUCTION

This chapter discusses final conclusions around both the theoretical and empirical parts of the research. Furthermore, it outlines the limitations of the research and discusses recommendations for the IT organisation pertaining to the utilisation of the newly developed HPO model, recommendations for the field of Industrial and Organisational Psychology in respect of HPOs, and finally, recommendations for future research.

6.2 CONCLUSIONS

This study consisted of two phases: firstly, a theoretical HPO model was developed through means of a literature study. Secondly, the empirical model was tested using explorative factor analysis (EFA) and confirmatory factor analysis (CFA).

In section 1.4.1, the general aim of the research was formulated, that is to develop and validate a High Performance Model for an IT organisation. The general research aim was achieved through the attainment of the specific aims, (see section 1.4.2), as well as through the central hypothesis of the research (see section 1.7). This is discussed in the sections below.

6.2.1 The literature research

Research on high performance organisations was presented in the literature research. Conclusions around the specific aims pertaining to the literature research (as formulated in section 1.4.2.1) and how they were achieved, will now be discussed:

Research aim 1: To define High Performance Organisations (HPO)

This objective was achieved in Chapter 2. The following came to light in achieving this objective:

- The abundant and vast literature on HPOs [Argenti (1976); Bibeault (1982 & 1998); Bronkhorst (1996); Collins (2001); Collins & Porras (1994); Hamel & Prahalad (1994); Joyce, Nohria & Roberson (2003); Kotter & Heskett (1992); Peters & Waterman (1982); Slatter (1984); Treacy & Wiersema (1995)] suggested a variety of definitions for HPOs which indicate that there is no widely accepted definition of what an HPO is.
- Researchers explored HPO within the public sector, that is De Waal (2010) and Popovich (1998) as well as in the private sector, that is Blanchard (2007), Bronkhorst (2011), De Waal (2012), Holbeche (2005), Kirkman, Lowe, and Young (1999), and Miche (2001).
- De Waal (2012, p. 37) defined an HPO as an organisation *that achieves financial and non-financial results that are exceedingly better over a period of five years or more, compared to its peer group. High Performance Organisation status is attained by focusing in a disciplined way on what really matters to an organisation*.
- For the purposes of this research, De Waal's (2012) definition of HPOs was adopted as it is broader than other definitions and considers financial and non-financial aspects and the definition considers a time period, that is for five years, indicating the importance of sustainability.

Research aim 2: To evaluate (assess) existing High Performance frameworks/models.

This objective was achieved in Chapter 2. The following came to light in achieving this objective:

- A wealth of literature, HPO frameworks and models were discussed and analysed (see section 2.3).
- A common factor within the literature was the structured approach that all the researchers followed, that is all of them had identified certain steps / processes to follow in order to achieve high performance.
- Many of them highlighted some form of *flexibility* (Akdemir et al., 2010; De Waal; 2012; Foster & Kaplan, 2001; Haeckel, 1999; Light, 2005; Mohrman & Cummings, 1989; Pasmore (1994); Popovich, 1998; Volberda, 1998).
- *Leadership* seemed to play a valuable role in high performance in some of the HPO literature (Butteriss, 1998; Cocks, 2012; Collins, 2001; De Waal, 2012; Foster & Kaplan, 2001; Goldsmith & Clutterbuck, 1997; Heller, 1997; Joyce et al., 2003; O'Reilly & Pheffer, 2000; Mische, 2001; Owen et al., 2002).
- The value of *culture* was highlighted in De Waal (2010); Duques and Gaske (1997); Heller (1997); Joyce et al. (2003); and Gupta (2011).
- Many authors focused on the importance of investing in *people* (Akdemir, 2010; Annunzio, 2004; Beer, 2009; Butteriss, 1998; Cheyfitzm, 2003; Cocks, 2012; Collins, 2001; De Waal, 2012; Hodgetts, 1998; Holbeche, 2005; Mills, 1994; Nel & Beudeker, 2009; O'Reilly & Pheffer, 2000; Osborne & Cowen, 2002; Owen et al., 2001; Pasmore, 1994; Popovich, 1998; Schaffer, 1988).
- A frequently mentioned factor was *innovation* in Akdemir (2010); De Waal (2012); Duques & Gaske (1997); Goldsmith and Clutterbuck (1997); Holbeche (2005); Joyce et al. (2003); Mische (2001); Pasmore (1994).
- *Strategy / vision* also played a part in some (Akdemis, 2010; Brizuis et al., 1998; Butteriss, 1998; Cocks, 2012; De Waal, 2012; Joyce et al., 2003; Mills, 1994; Nel & Beudeker, 2009; Owen et al., 2001).

- De Waal's (2012) study appears to be the most comprehensive as it covers a variety of factors necessary to obtain high performance. Its applicability is also extensive and global.

Research aim 3: To identify what sustains high performance.

This objective was achieved in Chapter 2. The following came to light in achieving this objective:

- The literature on sustaining high performance (Bagorogoza & De Waal, 2010; Iraci, 2018; Wolf, 2015) suggested a variety of factors required to sustain high performance which indicates that there is no consensus but rather depends on the organisation (see section 2.4).

- *Having a shared vision, mission, values, and strategies* were highlighted by Holbeche (2005) and Owen et al. (2001), while Iraci (2018) added to this in stating that risk must be managed around the vision, execution, and communication (see sections 2.4.1, 2.4.2 and 2.4.6).

- Holbeche (2005) and Wolf (2015) highlighted *agility / flexibility* as playing a crucial role.

- Bagorogoza and De Waal (2010) found that that *knowledge management (KM)* affects high performance when the HPO framework is in place. Wolf's (2015) second movement is informative / inquiry with its key actions being: Caring about our people, *Seeking input and sharing information and walking the talk*, which supports what Bagorogoza and De Waal (2010) highlighted (see sections 2.4.3, 2.4.4, and 2.4.5).

- The researcher concluded that many factors determine whether high performance is sustained. The literature agrees on factors that include having a shared vision, mission, values, and strategies, agility / flexibility and knowledge management. If leadership has identified and implemented an HPO framework or model and is

consistently driving implementation, year after year, high performance will be sustained.

Research aim 4: To develop / identify a theoretical High Performance Model.

This objective was achieved in Chapter 3. The following came to light in achieving this objective:

- A wealth of literature, HPO frameworks and models were discussed in Chapter 2 (see section 2.3) and summarised in Chapter 3 (see Table 3.3).
- Belt's (2008) criteria for evaluation were customised for the purposes of this research study (see section 3.5).
- The evaluation indicated that most of the HPO studies were representative, most of them are not statistically sound, most of them did not make use of a control group, in most of them the periods of study were long enough, half of them are relevant to all types of organisations, that is profit, non-profit and government, most of them are not applicable in practice with a diagnosis model and clear implementation method, and finally, most of them are not universal (see section 3.5).
- De Waal's (2012) study was adopted as the most comprehensive since it covers a variety of factors necessary to obtain high performance. Its applicability is also extensive and global.
- De Waal's (2012) HPO model was integrated with the IT organisation's HPO Model and a proposed theoretical HPO model was illustrated that highlight the key variables necessary to achieve high performance (see section 3.7).

6.2.2 The empirical research

Research on high performance organisations was presented in the literature research. Conclusions around the specific aims pertaining to the literature research (as formulated in section 1.4.2.1) and how they were achieved, will be discussed next:

Research aim 1: To gather data by means of three measurements, over six years, which can be used to statistically determine the organisational and behavioural variables that influence high performance in an IT organisation in South Africa.

This objective was achieved in Chapter 4. The following came to light in achieving this objective:

- The researcher made use of convenience sampling, a non-probability sampling method. This specific sampling method was chosen as all employees were invited to voluntarily complete the questionnaire instrument (see section 4.2.2, Step 1).
- The characteristics of the sample indicated that the population characteristics were reflected in the responses with regards to Years of service, Generation born into, Race, Gender, and Job level (see section 4.2.2, Step 2). Significant group differences between groups were found (see section 5.6) and are highlighted under research aim 5.
- To measure the organisation's HPO Model and gather the required data for validity purposes, an HPO survey was developed specifically for the organisation in this study and the same HPO survey was administered in 2012, 2014 and 2016 respectively (see section 4.2.2, Steps 3 and 4). Using the same survey allowed the researcher to compare the survey results over a period of six years.
- The data was reviewed and prepared for analysis and then analysed to execute statistical and quantitative procedures (see section 4.2.2, Step 5).
- The researcher ensured that the necessary steps were taken to adhere to ethical research practices (see section 4.2.2, Step 6).

- A total of 3,451 responses were received in the three iterations of the questionnaire administration.
- If a well-defined, ethical survey process is followed when administering surveys, valid and reliable data can still be obtained, even during a process of restructuring - over a long period, in this case six years.
- The researcher also found that, although morale was low, employees could voice their frustrations in the survey thereby highlighting what exactly needs to change in order to achieve high performance.
- Non-participation is also significant because it shows the level of resistance within the organisation, which is a hindrance to high performance.

Research aim 2: To validate the questionnaire and determine its reliability.

This objective was achieved in Chapter 5. The following came to light in achieving this objective:

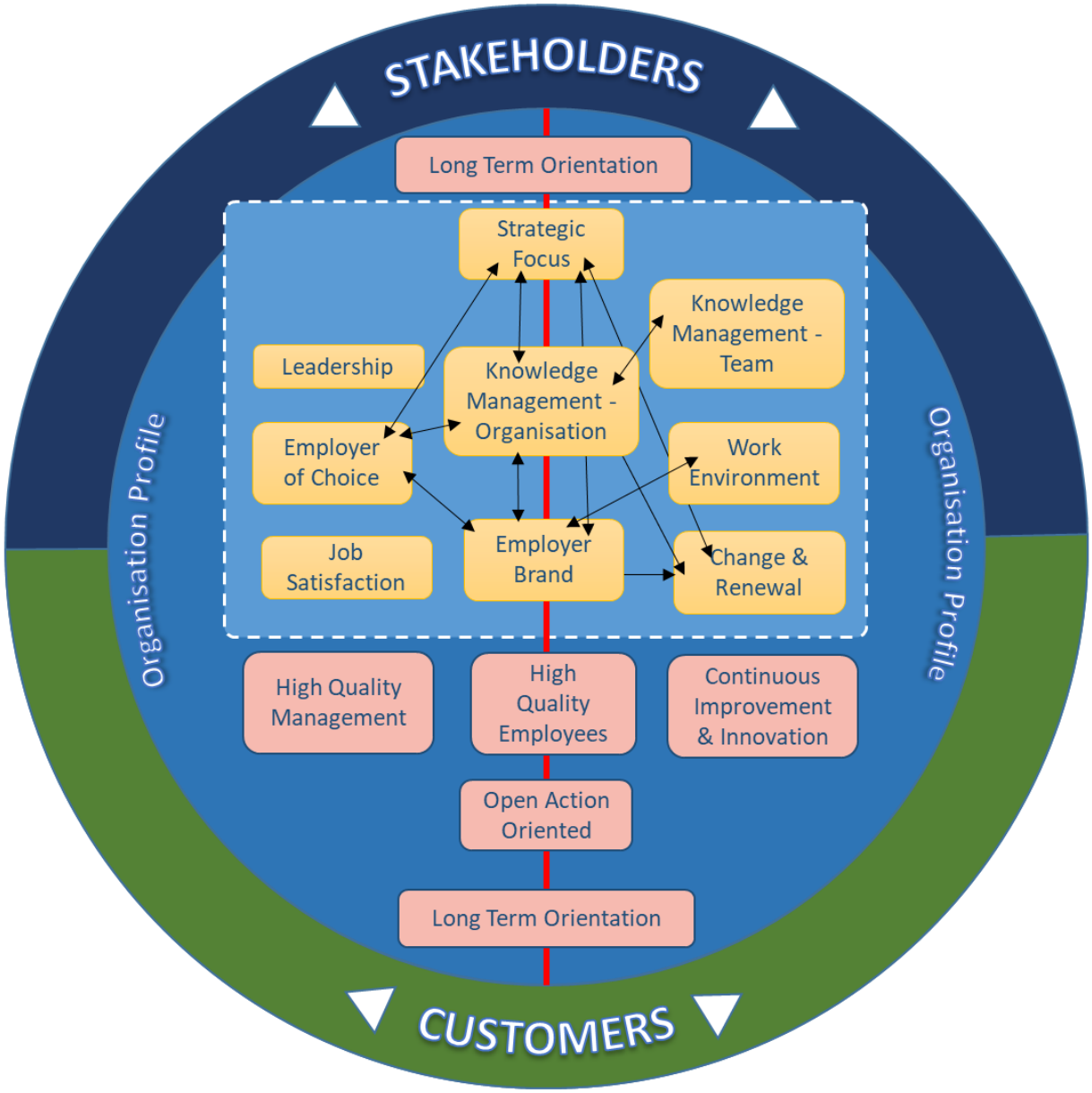
- The validity and reliability of the HPO survey were discussed in section 5.3.1 by means of exploratory factor analysis (EFA).
- For the 2012 and 2014 data, 32 items were removed through exploratory factor analysis. For the 2016 data, 27 items were removed (see section 5.3.1.1).
- Originally the HPO questionnaire consisted of 13 constructs. After factor analysis, six constructs were removed (i.e. Employee Engagement, Diversity, Vision, Mission and Values, Organisational Culture, Building High Performance Organisation. and CMMI Institutionalisation), four constructs remained unchanged (i.e. Employer of choice, Change and Renewal, Work Environment, and Employer Brand), one construct was divided into two (i.e. Knowledge Management divided into Knowledge Management -organisation and Knowledge Management – team). Finally, one construct was added (Strategic Focus) (see section 5.4.1.1).
- The reliability was indicated by a Cronbach alpha value of .878 (see section 5.4.1.2).

- With factor analysis and reliability testing new dimensions emerged that can add value to the interpretation of results and create value for future interventions.
- The HPO valid and reliable questionnaire with new dimensions proved to be a trustworthy tool for measuring high performance and can consequently be utilised by other IT organisations to measure high performance.

Research aim 3: To validate the IT organisation's High Performance Model.

This objective was achieved in Chapter 5. The following came to light in achieving this objective:

- Confirmatory Factor Analysis was used for HPO Models 1, 2, and 3 based on the 2016 data.
- High Performance Organisation Model 1 (2016), 2 (2016) and 3 (2016) showed a good fit; however, the researcher concluded that Model 2 (2016) appears to be more reliable, pragmatic, and stable.
- A new best-fitting HPO model was postulated based on new constructs postulated in the factor analysis.
- An integrated theoretical and empirical HPO model can therefore be illustrated as follows:



Notes:

1. Yellow blocks indicate validated constructs
2. Red blocks/white text indicate constructs not validated
3. Strong relationships = ⟷

Figure 6.1. An integrated theoretical and empirical HPO Model (Researcher)

- Pearson correlations, as indicated in Table 5.28, show 12 strong effect sizes and 11 medium effect sizes (see section 5.5.2). Knowledge Management – organisation has a

strong relationship with Employer of Choice, Knowledge Management – team, Strategic Focus, Change and Renewal as well as with Employer Brand. Strategic Focus and Change and Renewal have a strong relationship. Strong relationships exist between Employer of Choice and Strategic Focus, as well as between Employer of Choice and Employer Brand. Finally, Employer Brand has strong relationships with Strategic Focus, Change and Renewal, and Work Environment.

- Knowledge Management – organisation showed strong correlation with five of the nine constructs and medium correlation with two of the nine constructs. The implication is that when Knowledge Management – organisation is improved, the other constructs will also improve which results in high performance.
- High Quality Management, High Quality Employees, Continuous Improvement and Innovation, Open Action Orientation, and Long Term Orientation are the HPO factors from De Waal's (2012) HPO model. It is important to note that, for the purposes of this study, the researcher did not re-validate De Waal's (2012) HPO model.
- The following HPO elements remain a part of the integrated empirical and theoretical HPO model, however these elements were not validated in this study:
    - *Organisation Profile* refers to the organisation's responses to those environmental factors that have financial, operational, relational, and reputational challenges or impacts.
    - *Stakeholders* refer to an understanding of and responding to the stakeholder needs, wants, and expectations dictates the organisation's high performance from its perspective. The organisation engages stakeholders appropriately through strong partnerships and alignment to adhere to the mandate of the Act that governs the organisation.
    - *Customers* characterises the engagement strategies with the organisation's customers that is based on strong partnership to demonstrate that the organisation understand the customers' wants, needs, and expectations, both now and in the future.

- Conclusions pertaining to the central hypothesis and other hypotheses included the following:
    - **The central hypothesis:** The High Performance Model was consistent over 3 years of study (see section 5.3.2.3).
    - **Hypothesis 1**: It was expected that the HPO questionnaire would be valid and reliable. This hypothesis was accepted in the empirical research for the study (see section 5.3.1.1).
    - **Hypothesis 2**: The researcher expected the IT organisation's HPO model to be valid and consistent. This hypothesis was accepted in the empirical research for the study (see section 5.3.2.2).
    - **Hypothesis 3:** It was expected that changes relating to the HPO model would take place between the first, second and third surveys. This hypothesis was rejected in the empirical research for the study (see section 5.3.2.3).
    - **Hypothesis 4:** The researcher expected all the biographical groups to differ significantly in terms of construct levels of high performance. This hypothesis was partially accepted in the empirical research for the study (see section 5.5).

Research aim 4: To determine if any changes relating to the HPO model took place between the first, second and third surveys.

This objective was achieved in Chapter 5. The following came to light in achieving this objective:

- After validating the three HPO models and concluding that HPO Model 2 was more reliable, the researcher verified HPO Model 2's consistency across the respective years of study.
- HPO Model 2 based on 2012 data showed a good fit, except GFI and PNFI were not close to .90 or .95.

- HPO Model 2 based on 2014 data showed a good fit, except CMIN/df was not <3, GFI and PNFI were not close to .90 or .95.

- When comparing the results of the fit indices, it appears that HPO Model 2 (2016) is statistically reliable, pragmatic, and stable. The HPO Model 2 stays reliable, even when compared to other years 2012 and 2014, as the values do not significantly differ from one year to the next. The researcher therefore concluded that Model 2 stayed the most consistent over the six years of study (see section 5.3.2.3) and no changes relating to the HPO model took place.

- The factors that influence high performance appear to be consistent for an organisation. If an organisation develops a HPO model, the model will be valid for several years. This therefore seems to confirm that organisational culture and strategic focus do not change over the short term.

Research aim 5: To assess whether the biographical variables play a role in high performance.

This objective was achieved in Chapter 5. The following came to light in achieving this objective:

- Independent samples *t*-tests and One-way ANOVA tests were used to analyse group differences based on years of work, age, race, gender, and job level to determine whether significant positive group differences exist (see section 5.6 and Annexure 13).

- The results indicate that employees who have worked at the organisation for less than two years seem to be more positive regarding most of the constructs relating to high performance, except for Work Environment. It could be that they are more positive because they have not been with the organisation for that long which could indicate that high performance declines the longer employees work at the organisation.

- Older employees believe that Knowledge Management – organisation, Work Environment, and Job Satisfaction are in line with high performance while the

younger employees believe that Strategic Focus, Change and Renewal and Employer Brand are in line with high performance. This could mean that the latter HPO factors are more important to younger generations and add value to them in terms of high performance.

- African employees believe that Employer of Choice, Strategic Focus, Change and Renewal, and Work Environment are in line with high performance more so than the other races. White employees believe that Job Satisfaction is in line with high performance more so than the other races. This may mean that African employees believe the organisation has achieved high performance in more areas compared to the other races.

- Male employees are more satisfied in terms of job satisfaction, that is involvement in decision-making; salary package; career and training opportunities; challenging roles; empowerment; and use of skills and expertise than female employees. This could mean that female employees experience lower job satisfaction, a fact that needs to be addressed as females make up almost half of the participating organisation's workforce.

- B-level employees believe that Employer of Choice, Strategic Focus, Work Environment, and Employer Brand are in line with high performance more so than the other job levels. While A-level employees agree with the B-level employees in terms of Employer Brand, the D-level employees have higher job satisfaction. This indicates that the lower job levels believe the organisation has achieved high performance in more areas that the higher job levels.

The limitations of the research study are discussed next.

6.3 LIMITATIONS

The limitations of this study are explained firstly around the literature study and secondly around the empirical research.

6.3.1 Limitations of the literature study

Although a vast body of literature exists on high performance, none of the research specifically addresses IT organisations. As a result, the literature review was concluded with a generic view of high performance and can therefore be applied to any organisation.

Another limitation relates to the lack of precise definition for high performance. The abundant literature on HPOs [Argenti (1976); Bibeault (1982 & 1998); Bronkhorst (1996); Collins (2001); Collins & Porras (1994); Hamel & Prahalad (1994); Joyce, Nohria, & Roberson (2003); Kotter & Heskett (1992); Nel & Beudeker, (2009); Peters & Waterman (1982); Slatter (1984); Treacy & Wiersema (1995)] suggested a variety of definitions for HPOs, which indicate that there is no widely accepted definition of what a HPO is.

Lastly, a limitation exists around the fact that there is not one acceptable HPO framework or model. The considerable literature on HPOs [Beer (2009); Cheyfitz (2003); Cocks (2012); Collins (2001); De Waal (2012); Goldsmith & Clutterbuck (1997); Haeckel (1999); Joyce et al., (2003); Light (2005); Mills (1994); Mische (2001); Mohrman & Cummings (1989); Shaffer (1988); Sull, (2003); Volberda (1998)] illustrated a variety of different HPO frameworks and models which, again, shows that there is no widely accepted HPO framework or model.

6.3.2 Limitations of the empirical research

The following limitations exist in terms of the empirical research:

- The questionnaire was dependent on the self-awareness and perceptions of the respondents, which could have potentially affected the validity of the results.

- All three samples of data gathered for this study were from a single organisation and, as such, the research findings cannot be generalised as a result of the sample being one of convenience.
- Most of the respondents were Africans, with White, Indian, and Coloured respondents in the minority. This could potentially influence the generalisation of the results to the broader multicultural South African population.
- The participating organisation was going through a long and complicated restructuring during administration of the questionnaire (2012-2014). This had an impact on employees' willingness to participate as their morale was low; they were uncertain, sceptical, and untrusting towards leadership at the time. It may also have influenced the research results as there was a lot of uncertainty and fear present in the organisation.
- In addition to this, the organisation administered other surveys during the six-year period, that is Organisational Health Index (OHI) and Best Employer. This led to 'survey fatigue' and employees became resistant to participating in surveys.

The recommendations emanating from the conclusions are discussed next.

6.4 RECOMMENDATIONS

The following sections discuss recommendations for the IT organisation utilised in this research, for the field of Industrial and Organisational Psychology and lastly for future research.

6.4.1 Recommendations for the IT organisation pertaining to the utilisation of the newly developed HPO model

The HPO questionnaire was proved to be a valid and reliable questionnaire that measures wat it is supposed to measure.

The IT organisation's HPO model was validated and, together with the theoretical model (see section 3.7), a new HPO model was developed (see section 5.3.2.2). The new HPO Model is more streamlined, is easily interpreted, and simpler than the theoretical model.

Recommendations are focused on all HPO dimensions:

To address **Strategic Focus (SF)**: The public sector can be unpredictable because of political influence, and the IT industry changes rapidly. Therefore, the organisation should adopt an adaptive strategy that can be adapted if need be. In the face of unpredictable change, the only strategy that makes sense is to become adaptive. Haeckel (1999) and De Waal (2012) agreed that the organisation should have a distinctive strategy. The strategy should be cascaded down through the organisation with achievable and adaptive tasks that are assigned to the various job levels. Collaboration should exist within the organisation (different departments) as well as between employees and stakeholders and customers. The following groups especially require development in Strategic Focus: employees within the 3-31+ years of work group, the older generations (born between 1946 and 1964), Indian and White race groups, employees in the C and D job levels.

To address **Knowledge Management – organisation and team**: A comprehensive knowledge management strategy should be developed and implemented. The strategy should include aspects such as how the organisation will manage information, data and knowledge, as well as how knowledge sharing will transpire, for example, through mentoring and coaching, dialogue, collaboration within and across teams (De Waal, 2012). New ideas can be generated via an online platform where ideas are posted and evaluated. The following groups can benefit from development in Knowledge Management – organisation: employees within the 3-20 years of work group and the younger generations (born between 1978 and 2000). Employees within the 3-10 years of work group can benefit from developing the Knowledge Management – team area.

To address **Job Satisfaction (JS)**: Values should be translated into behaviours and actions and reinforced at all levels. Furthermore, a skills audit should be conducted for all job levels to identify developmental gaps and train accordingly to close the gaps. Finally, all policies and procedures should be clearly and thoroughly communicated through the organisation, for example, Total Guarantee Package and comparable market salary packages. The following groups require development in this area: female employees, employees within the 3-10 years of work group, African employees, the younger generations (born between 1978 and 2000) and the C job level.

To address **Change and Renewal (CR):** Continue with the change management strategy implementation. The project plan should be expanded to include the challenges highlighted in the findings of the HPO results. De Waal (2012) highlighted that expectations should be set explicitly, responsibilities assigned clearly, roadblocks discussed, resources freed-up, incentive systems that reward change should be installed, etc. The following groups can benefit from development in Change and Renewal: employees within the 6-30 years of work group, the older generations (born between 1946 and 1964), White and Indian race groups.

To address **Leadership (LS):** The trust relationship should be repaired on managerial levels. Relationships suffered as a result of the restructuring process. In order to rebuild the trust, managers and leaders should commit to starting afresh and agreeing to align their words and actions, keeping in mind the organisational values. Leaders should invest in their employees by listening to and addressing their needs. Credit should be given to those who deserve it. Information should consistently be shared throughout the organisation, especially when it comes to important projects and decisions that affect employees, for example, restructuring. Employees who have been with the organisation for 3-20 years can especially benefit from development in this area.

To address **Work Environment (WE):** Consider new assessment of the work environment (i.e. computers, IT systems, physical resources, systems and processes). Employees will be motivated to stay and to be more productive when tools of trade, systems and processes are continuously modified, simplified, and improved. The following groups can benefit from

development in Work Environment: the younger generations (born between 1978 and 2000), Indian race group, as well as the D and E job levels, respectively.

To address **Employer of Choice (EC):** Implement an approved Rewards and Recognition programme to retain skilled workers. Furthermore, a comprehensive Employee Value Proposition (EVP) should be developed to ensure that the right talent is attracted as well as to retain skilled employees. Design and implement the approved Integrated Talent Management strategy and Succession Planning Policy. De Waal (2012) suggested that employees should be educated on the benefits of diversity. Diversity management should form part of the organisation's strategic plan. Promote the belief that the best team consists of the best individual people who are both capable and diverse. Therefore, there should be diversity in training, experience, and identity. Job and location rotation programmes can assist in allowing people to get new and different experiences. Conflict between diverse people can be minimised by recruiting people who want to collaborate with people who are different from them (De Waal, 2012). Employees who fall within the 6-30 years of work group especially require development in this area, as well as the White race group and the D job levels.

To address **Employer Brand (EB):** Implement recommendations from all questionnaires administered in the organisation, that is results from the Organisational Health Index (OHI) and Top Employer surveys. Furthermore, customer satisfaction dimensions can be included within HPO model. Encourage employees to promote the employer brand by living out the organisational values though their interactions with clients and customers. The following groups can especially benefit from development in Employer Brand: employees who fall within the 6-30 years of work group, the older generations (born between 1946 and 1964) as well as the C, D, and E job levels.

6.4.2 Recommendations for the field of Industrial and Organisational Psychology in respect of High Performance Organisations

The literature review provided a solid foundation for the development of a theoretical HPO model. Furthermore, the empirical HPO model was proven to be valid, reliable, pragmatic,

and stable. Both the theoretical and empirical models are valuable additions to the Industrial and Organisational Psychology field.

Based on the conclusions reached in this study, the following recommendations are made for the field of Industrial and Organisational Psychology, Industrial and Organisational Psychologists (IOPs) as well as Organisational Development (OD) Practitioners:

- IOPs and OD practitioners assist organisations to improve their performance and even obtain and sustain high performance. The validated HPO questionnaire and HPO model can be used to diagnose any IT organisation after validating it for the specific environment. The developmental gaps identified can then be used to design and implement appropriate interventions to reach high performance.
- The literature review can be used by IOPs and OD practitioners to improve their understanding of HPOs. This knowledge can then be used to advise organisations on how to obtain and sustain high performance.

6.5 RECOMMENDATIONS FOR FUTURE RESEARCH

The following recommendations are made for researchers that want to embark on further research:

- Researchers can narrow down the vast amount of definitions and models on HPO to one universal definition and model of HPOs that can apply to any organisation.
- The new HPO model should be tested in various organisations and sectors.
- The same study can be repeated in other organisations as this study's sample was only limited to a single IT organisation within the public sector.
- Where significant relationships were identified, future researchers can explore the possibilities of overcoming hurdles to high performance.

- A more comprehensive study to evaluate the new HPO model in its totality can be undertaken by researchers, that is the dimensions measured in this study together with De Waal's dimensions.

6.6 EVALUATION OF THE STUDY

The research study explored the development and validation of a HPO model within an IT organisation. The research results revealed a validated HPO questionnaire and reliable, pragmatic, and stable HPO model.

6.6.1 Value added at a theoretical level

The literature review provided a solid foundation for the development of a theoretical HPO model. As a result, the theoretical model developed is a valuable addition to theoretical research on HPOs. The research results should contribute to the body of knowledge relating to high performance within the South African context.

6.6.2 Value added at an empirical level

The empirical HPO questionnaire was validated and the HPO model was proven to be valid, reliable, pragmatic, and stable, over a six-year period.

Knowledge Management – organisation has a strong relationship with Employer of Choice, Knowledge Management – team, Strategic Focus, Change and Renewal as well as with Employer Brand. Strategic Focus and Change and Renewal have a strong relationship. Strong relationships exist between Employer of Choice and Strategic Focus, as well as between Employer of Choice and Employer Brand. Finally, Employer Brand has strong relationships with Strategic Focus, Change and Renewal, and Work Environment.

Knowledge Management – organisation correlated with all the constructs and has the strongest relationships with Employer of Choice, Knowledge Management – team, Strategic Focus, Change and Renewal as well as with Employer Brand. The implication is that when Knowledge Management – organisation is improved, all the other constructs will also improve.

South African studies on high performance are rare and therefore this study adds to the research on HPO in the South African context. Academics and researchers can use the validated HPO model as a basis for future research.

Although several HPO studies exist in the literature, not many of them are longitudinal in nature. This research adds to longitudinal HPO research.

6.6.3 Value added at a practical level

At a practical level, IOPs and OD practitioners could better understand the theory behind high performance. They can also use the validated HPO questionnaire and empirical HPO model to measure high performance in any IT organisation. The developmental gaps identified can then be addressed through various interventions. With increased competition and globalisation organisations struggle to survive, therefore this study can provide a roadmap for organisations to obtain and sustain high performance.

6.7 CHAPTER SUMMARY

This chapter discussed final conclusions around both the theoretical and empirical parts of the research. Furthermore, it outlined the limitations of the research and discussed recommendations as per specific research aims, that is to provide recommendations to the IT organisation pertaining to the utilisation of the newly developed HPO model, the HPO

domain based on the findings of this research study as well for the field of Industrial and Organisational Psychology in respect of High Performance Organisations. The chapter also highlighted the value added on a theoretical, empirical, and practical level.

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ANNEXURE 1: PARTICIPATING ORGANISATION'S HPO ELEMENTS DISCUSSION

The participating organisation's strategy document with HPO elements is available on request.

ANNEXURE 2: HPO QUESTIONNAIRE

The HPO questionnaire is available on request.

ANNEXURE 3: EXPLORATORY FACTOR ANALYSIS – 2016 SAMPLE

UNRESTRICTED – Initial Results of Communalities and Pattern Matrix

Communalities		
	Initial	Extraction
Q9	0,710	0,726
Q10	0,648	0,656
Q11	0,702	0,740
Q12	0,758	0,766
Q13	0,397	0,400
Q14	0,477	0,443
Q15	0,710	0,679
Q16	0,593	0,622
Q17	0,601	0,640
Q18	0,502	0,502
Q19	0,741	0,734
Q20	0,374	0,329
Q21	0,618	0,611
Q22	0,240	0,183
Q23	0,339	0,277
Q24	0,455	0,415
Q25	0,520	0,495
Q26	0,837	0,811
Q27	0,795	0,793
Q28	0,835	0,838
Q29	0,641	0,616
Q30	0,653	0,632
Q31	0,801	0,752
Q32	0,819	0,804
Q33	0,869	0,871
Q34	0,585	0,581
Q35	0,431	0,386
Q36	0,616	0,606
Q37	0,544	0,523
Q38	0,780	0,766
Q39	0,633	0,666
Q40	0,620	0,604
Q41	0,575	0,524
Q42	0,773	0,778
Q43	0,776	0,769
Q44	0,325	0,282
Q45	0,551	0,542
Q46	0,656	0,656
Q47	0,732	0,786
Q48	0,742	0,781
Q49	0,647	0,644
Q50	0,439	0,471

Communalities		
	Initial	Extraction
Q51	0,380	0,405
Q52	0,563	0,675
Q53	0,628	0,661
Q54	0,496	0,474
Q55	0,309	0,260
Q56	0,446	0,415
Q57	0,472	0,442
Q58	0,433	0,460
Q59	0,545	0,559
Q60	0,504	0,541
Q61	0,405	0,311
Q62	0,667	0,676
Q63	0,616	0,607
Q64	0,713	0,710
Q65	0,694	0,702
Q66	0,677	0,699
Q67	0,371	0,308
Q68	0,353	0,307
Q69	0,630	0,607
Q70	0,637	0,632
Q71	0,500	0,481
Q72	0,527	0,539
Q73	0,573	0,532
Q74	0,591	0,564
Q75	0,550	0,476
Q76	0,592	0,534
Q77	0,460	0,436
Q78	0,508	0,494
Q79	0,551	0,549
Q80	0,601	0,580
Q81	0,525	0,504
Q82	0,497	0,457
Q83	0,699	0,689
Q84	0,739	0,753
Q85	0,664	0,696
Q86	0,712	0,738
Q87	0,612	0,605
Q88	0,624	0,610
Q89	0,460	0,430
Q90	0,543	0,563
Q91	0,581	0,612
Q92	0,675	0,728
Q93	0,638	0,642
Extraction Method: Principal Axis Factoring.		

Total Variance Explained							
Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	28,249	33,235	33,235	27,857	32,773	32,773	16,696
2	6,366	7,490	40,724	6,061	7,130	39,903	17,758
3	3,720	4,376	45,101	3,389	3,987	43,891	13,984
4	3,059	3,599	48,700	2,644	3,111	47,001	21,263
5	2,357	2,773	51,473	1,942	2,285	49,287	13,687
6	1,965	2,311	53,784	1,487	1,749	51,036	13,602
7	1,785	2,100	55,884	1,387	1,632	52,667	17,666
8	1,417	1,667	57,551	1,008	1,186	53,853	12,732
9	1,302	1,532	59,082	0,911	1,071	54,925	11,070
10	1,193	1,403	60,485	0,757	0,891	55,815	13,025
11	1,154	1,358	61,843	0,716	0,842	56,657	8,368
12	1,130	1,330	63,173	0,645	0,759	57,416	14,176
13	1,010	1,188	64,361	0,558	0,657	58,073	12,931
14	0,975	1,147	65,509				
15	0,946	1,113	66,622				
16	0,936	1,101	67,723				
17	0,853	1,003	68,726				
18	0,818	0,963	69,689				
19	0,803	0,944	70,633				
20	0,759	0,893	71,527				
21	0,738	0,868	72,395				
22	0,732	0,861	73,256				
23	0,681	0,801	74,057				
24	0,654	0,770	74,827				
25	0,635	0,747	75,574				
26	0,623	0,733	76,308				
27	0,604	0,710	77,018				
28	0,592	0,697	77,714				
29	0,586	0,689	78,403				
30	0,570	0,671	79,074				
31	0,568	0,668	79,742				
32	0,555	0,653	80,395				
33	0,532	0,626	81,020				
34	0,528	0,621	81,642				
35	0,519	0,611	82,253				
36	0,503	0,592	82,845				
37	0,494	0,581	83,426				
38	0,478	0,562	83,988				
39	0,471	0,554	84,542				
40	0,464	0,545	85,087				
41	0,451	0,531	85,618				
42	0,441	0,518	86,136				
43	0,431	0,507	86,643				
44	0,427	0,502	87,145				
45	0,417	0,490	87,635				
46	0,416	0,490	88,125				
47	0,397	0,467	88,592				

Total Variance Explained							
Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
48	0,391	0,460	89,052				
49	0,385	0,453	89,505				
50	0,383	0,450	89,955				
51	0,375	0,442	90,397				
52	0,364	0,428	90,825				
53	0,362	0,425	91,251				
54	0,344	0,404	91,655				
55	0,332	0,391	92,046				
56	0,324	0,381	92,427				
57	0,318	0,374	92,801				
58	0,314	0,370	93,171				
59	0,298	0,351	93,522				
60	0,292	0,344	93,865				
61	0,284	0,334	94,199				
62	0,280	0,329	94,528				
63	0,274	0,322	94,851				
64	0,259	0,305	95,156				
65	0,258	0,304	95,460				
66	0,256	0,301	95,761				
67	0,252	0,297	96,058				
68	0,247	0,291	96,349				
69	0,241	0,283	96,632				
70	0,232	0,273	96,905				
71	0,229	0,269	97,174				
72	0,223	0,263	97,437				
73	0,215	0,253	97,690				
74	0,213	0,251	97,940				
75	0,201	0,236	98,176				
76	0,198	0,233	98,410				
77	0,187	0,220	98,630				
78	0,181	0,213	98,843				
79	0,176	0,208	99,050				
80	0,169	0,199	99,250				
81	0,165	0,194	99,444				
82	0,139	0,164	99,608				
83	0,123	0,145	99,753				
84	0,111	0,130	99,883				
85	0,099	0,117	100,000				

Extraction Method: Principal Axis Factoring.

a. When factors are correlated, sums of squared loadings cannot be added to obtain a total variance.

Factor Matrix[a]													
	Factor												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Q40	0,676												
Q64	0,674	0,283		0,337									
Q49	0,669			-0,202				-0,221					
Q48	0,668	0,207		-0,253			0,317	-0,224					
Q70	0,666			-0,227									
Q74	0,664												
Q38	0,660	-0,509	-0,229										
Q92	0,658			-0,271								0,288	
Q19	0,657	-0,458	-0,222										
Q39	0,657	0,212											0,272
Q41	0,656												
Q69	0,655			-0,203			-0,239						
Q11	0,653			0,361					-0,302				
Q88	0,650	-0,392											
Q47	0,644			-0,285			0,339	-0,258					
Q59	0,643					0,286							
Q91	0,641			-0,276								0,236	
Q93	0,640			-0,232								0,221	
Q9	0,637			0,429					-0,234				
Q80	0,635									-0,262			
Q32	0,634	-0,533	-0,294										
Q33	0,634	-0,587	-0,324										
Q54	0,633												
Q29	0,631		-0,244										
Q76	0,623	0,229											
Q28	0,621	-0,587	-0,302										
Q37	0,621	0,223											
Q12	0,620	-0,521	-0,274										

Factor Matrix[a]													
	Factor												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Q79	0,616									-0,296			
Q90	0,611			-0,231									
Q66	0,608	0,381			-0,325								
Q72	0,608			-0,210			-0,238						
Q46	0,604			-0,243			0,308	-0,237					
Q81	0,601				-0,219								
Q26	0,601	-0,586	-0,300										
Q75	0,598												
Q82	0,595												
Q31	0,593	-0,530	-0,303										
Q34	0,592	0,354			-0,228								
Q10	0,592			0,379					-0,291				
Q65	0,590	0,387			-0,344								
Q45	0,588				0,207								
Q36	0,587	0,290		0,343									
Q56	0,587												
Q53	0,585	0,231			-0,280	0,289		0,206					
Q42	0,582	0,287	-0,216		0,289		0,242						-0,206
Q62	0,581	0,303			-0,437								
Q43	0,579	0,327			0,238	-0,202	0,228						-0,204
Q71	0,573			-0,216									
Q77	0,570												
Q86	0,566	-0,262	0,510										
Q57	0,565												
Q14	0,564												
Q73	0,564		0,374										
Q87	0,564	-0,326	0,381										
Q21	0,562	0,239		0,440									

Factor Matrix[a]													
	Factor												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Q25	0,560	0,218									0,251		
Q84	0,559	-0,283	0,497						-0,211				
Q30	0,557	0,302	-0,241		0,231								0,209
Q15	0,549	-0,539	-0,260										
Q24	0,548	-0,229											
Q89	0,543			-0,220									
Q78	0,543		0,359										
Q63	0,532				-0,447								
Q85	0,527	-0,215	0,504						-0,221				
Q83	0,523	-0,260	0,494										
Q60	0,513		0,202			0,285				0,204			
Q18	0,509			0,390									
Q68	0,466												
Q35	0,466			0,269									
Q52	0,463					0,413	0,271	0,327					
Q67	0,461	0,235											
Q16	0,458	-0,288	0,356								0,320		
Q61	0,453					0,217							
Q17	0,436	-0,236	0,379								0,321		
Q58	0,424					0,256		-0,230		0,217			
Q50	0,399	0,221			-0,227	0,322		0,241					
Q13	0,380			0,288		0,266							
Q51	0,376					0,292		0,273					
Q20	0,354			0,351									
Q23	0,348					0,211							
Q22	0,327												
Q55	0,326					0,280							
Q44	0,318				0,309								

Factor Matrix[a]													
	Factor												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Q27	0,594	-0,605	-0,257										
Extraction Method: Principal Axis Factoring.													
a. 13 factors extracted. 8 iterations required.													

a. Reproduced communalities

b. Residuals are computed between observed and reproduced correlations. There are 39 (1,0%) nonredundant residuals with absolute values greater than 0.05.

Pattern Matrix[a]													
	Factor												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Q33	0,978												
Q28	0,951												
Q26	0,944												
Q32	0,921												
Q31	0,896												
Q27	0,893												
Q12	0,875												
Q15	0,804												
Q38	0,804												
Q19	0,756												
Q88	0,591												
Q62		0,924											
Q65		0,883											
Q63		0,882											
Q66		0,871											

Pattern Matrix[a]													
	Factor												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Q34		0,585											
Q64		0,492			0,468								
Q37		0,487											0,301
Q76		0,396		0,317								0,285	
Q81		0,367										0,353	
Q67		0,352											
Q14		0,299											
Q84			0,898										
Q85			0,879										
Q83			0,869										
Q86			0,857										
Q87			0,619										
Q73			0,439									0,202	
Q24			0,231										
Q70				0,820									
Q69				0,804									
Q72				0,780									
Q71				0,690									
Q77				0,533									
Q56				0,396									
Q57				0,395		0,217							
Q74				0,385				0,252					
Q55				0,381				0,254					
Q75		0,249		0,375								0,299	
Q54				0,324				0,264					
Q25				0,293				-0,218			0,209		
Q23				0,289		-0,274		0,235					
Q11					0,798								
Q10					0,791								
Q9					0,782								
Q21					0,576								
Q18					0,466						0,328		
Q20		-0,201			0,301			0,259			0,233		
Q42						0,903							

Pattern Matrix[a]													
	Factor												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Q43						0,891							
Q44		-0,239				0,411							
Q36					0,290	0,338						0,221	
Q47							0,957						
Q48							0,902						
Q46							0,849						
Q49							0,660						
Q45							0,624						
Q41							0,321						
Q58								0,733					
Q60		0,202						0,714					
Q13								0,596					
Q59				0,221				0,496					
Q61							0,241	0,255					
Q52									0,875				
Q53		0,246							0,663				
Q50									0,662				
Q51									0,627				
Q92										0,758			
Q93										0,631			
Q91										0,593			
Q90				0,250						0,514			
Q89			0,202							0,317			
Q17											0,701		
Q16			0,256								0,644		
Q79												0,602	
Q80												0,577	
Q78			0,301									0,402	
Q82												0,324	
Q35								0,288				0,311	
Q68												0,261	
Q39						0,234							0,609
Q30						0,382							0,549
Q29						0,349							0,482

Pattern Matrix[a]													
	Factor												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Q40				0,235									0,408
Q22													
Extraction Method: Principal Axis Factoring. Rotation Method: Promax with Kaiser Normalization.[a]													
a. Rotation converged in 27 iterations.													

Structure Matrix													
	Factor												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Q33	0,930	0,287	0,428	0,468	0,280	0,272	0,416	0,414	0,268	0,314	0,363	0,349	0,355
Q28	0,913	0,273	0,435	0,457	0,284	0,256	0,394	0,452	0,263	0,291	0,326	0,346	0,341
Q26	0,894	0,239	0,411	0,431	0,264	0,264	0,384	0,421	0,258	0,297	0,344	0,371	0,325
Q32	0,893	0,331	0,433	0,468	0,302	0,300	0,416	0,400	0,274	0,295	0,381	0,330	0,332
Q27	0,885	0,226	0,455	0,457	0,221	0,224	0,377	0,435	0,247	0,293	0,325	0,348	0,321
Q12	0,866	0,312	0,437	0,469	0,344	0,306	0,398	0,406	0,239	0,260	0,372	0,312	0,295
Q38	0,862	0,321	0,476	0,496	0,294	0,270	0,453	0,484	0,280	0,358	0,326	0,425	0,426
Q31	0,853	0,245	0,380	0,417	0,284	0,275	0,385	0,406	0,263	0,292	0,319	0,403	0,365
Q19	0,833	0,354	0,432	0,510	0,399	0,344	0,409	0,457	0,290	0,285	0,477	0,372	0,329
Q15	0,815	0,228	0,407	0,451	0,250	0,221	0,353	0,386	0,217	0,225	0,334	0,246	0,264
Q88	0,735	0,339	0,537	0,533	0,306	0,292	0,453	0,450	0,255	0,434	0,269	0,453	0,384
Q66	0,218	0,822	0,300	0,514	0,495	0,434	0,465	0,257	0,391	0,410	0,234	0,395	0,421
Q65	0,218	0,818	0,260	0,499	0,520	0,469	0,447	0,245	0,386	0,344	0,235	0,349	0,353
Q62	0,253	0,813	0,285	0,497	0,376	0,382	0,451	0,252	0,427	0,366	0,337	0,329	0,331
Q63	0,250	0,736	0,340	0,405	0,324	0,296	0,366	0,314	0,385	0,334	0,407	0,351	0,245
Q34	0,224	0,716	0,242	0,450	0,555	0,482	0,462	0,283	0,413	0,344	0,331	0,416	0,482
Q37	0,316	0,666	0,343	0,523	0,446	0,423	0,505	0,291	0,387	0,405	0,347	0,373	0,533
Q76	0,291	0,646	0,351	0,611	0,357	0,380	0,523	0,277	0,407	0,483	0,243	0,522	0,410
Q81	0,350	0,609	0,375	0,522	0,314	0,358	0,477	0,275	0,424	0,446	0,375	0,537	0,297
Q14	0,327	0,580	0,279	0,525	0,421	0,454	0,486	0,213	0,390	0,281	0,398	0,244	0,378
Q67		0,512	0,254	0,419	0,366	0,300	0,348	0,214	0,309	0,352		0,364	0,349

	Structure Matrix Factor												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Q84	0,419	0,329	0,865	0,409	0,244	0,213	0,335	0,447	0,231	0,442	0,382	0,439	0,231
Q86	0,407	0,345	0,852	0,404	0,260	0,215	0,338	0,442	0,230	0,432	0,417	0,495	0,264
Q85	0,349	0,318	0,826	0,383	0,260	0,203	0,320	0,412		0,451	0,319	0,447	0,248
Q83	0,383	0,318	0,822	0,382	0,232	0,208	0,290	0,419	0,243	0,403	0,388	0,409	
Q87	0,481	0,305	0,755	0,407	0,257		0,335	0,490		0,406	0,368	0,524	0,274
Q73	0,404	0,377	0,656	0,465	0,257	0,291	0,325	0,470	0,267	0,360	0,486	0,511	0,214
Q24	0,462	0,282	0,539	0,466	0,264	0,206	0,385	0,502	0,239	0,423	0,310	0,433	0,360
Q70	0,400	0,492	0,353	0,785	0,377	0,454	0,578	0,356	0,382	0,481	0,214	0,422	0,476
Q69	0,402	0,453	0,399	0,760	0,379	0,397	0,523	0,401	0,353	0,501		0,459	0,469
Q72	0,356	0,480	0,327	0,720	0,353	0,381	0,487	0,299	0,351	0,473		0,401	0,426
Q71	0,310	0,422	0,317	0,676	0,336	0,344	0,474	0,341	0,416	0,470		0,382	0,390
Q77	0,329	0,514	0,289	0,636	0,347	0,405	0,491	0,216	0,391	0,394	0,241	0,300	0,386
Q74	0,525	0,408	0,579	0,613	0,337	0,343	0,415	0,595	0,297	0,444	0,363	0,546	0,371
Q54	0,492	0,424	0,407	0,612	0,332	0,379	0,514	0,519	0,428	0,372	0,279	0,422	0,366
Q56	0,343	0,503	0,295	0,604	0,418	0,405	0,486	0,334	0,481	0,347	0,275	0,332	0,367
Q75	0,289	0,554	0,361	0,600	0,318	0,363	0,485	0,324	0,360	0,503	0,229	0,534	0,393
Q57	0,309	0,490	0,249	0,591	0,454	0,509	0,460	0,351	0,435	0,304	0,254	0,250	0,345
Q25	0,325	0,546	0,220	0,554	0,436	0,533	0,497		0,360	0,281	0,372	0,224	0,434
Q61	0,293	0,297	0,302	0,442	0,231	0,314	0,436	0,395	0,395	0,286	0,273	0,249	
Q9	0,365	0,544	0,302	0,492	0,840	0,486	0,417	0,423	0,337	0,301	0,283	0,407	0,486
Q11	0,384	0,559	0,314	0,548	0,834	0,502	0,453	0,377	0,380	0,309	0,278	0,352	0,469
Q10	0,310	0,516	0,311	0,475	0,794	0,464	0,408	0,367	0,329	0,279	0,280	0,347	0,402
Q21	0,264	0,454	0,231	0,410	0,750	0,573	0,355	0,370	0,322	0,258	0,290	0,425	0,501
Q64	0,319	0,710	0,334	0,517	0,746	0,548	0,461	0,453	0,412	0,354	0,294	0,451	0,437
Q36	0,239	0,486	0,225	0,443	0,658	0,642	0,430	0,409	0,310	0,311	0,266	0,510	0,552
Q18	0,280	0,374	0,274	0,353	0,600	0,432	0,305	0,452	0,275	0,265	0,487	0,426	0,298
Q20	0,212		0,214	0,205	0,435	0,332		0,421			0,346	0,324	0,252
Q42	0,284	0,451	0,224	0,486	0,482	0,869	0,544	0,250	0,331	0,353	0,209	0,352	0,450
Q43	0,256	0,491	0,209	0,486	0,483	0,869	0,527	0,234	0,344	0,342	0,220	0,366	0,437
Q44			0,206	0,201	0,311	0,395	0,218	0,323		0,240		0,351	0,276
Q47	0,375	0,511	0,296	0,594	0,341	0,480	0,881	0,294	0,490	0,424	0,246	0,371	0,422

	Structure Matrix Factor												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Q48	0,383	0,543	0,319	0,599	0,386	0,507	0,880	0,270	0,474	0,441	0,229	0,410	0,488
Q46	0,381	0,455	0,296	0,565	0,311	0,460	0,799	0,308	0,437	0,378	0,266	0,323	0,363
Q49	0,357	0,577	0,362	0,580	0,384	0,461	0,776	0,334	0,441	0,484	0,223	0,513	0,486
Q45	0,371	0,389	0,322	0,542	0,352	0,470	0,702	0,302	0,305	0,377		0,435	0,457
Q41	0,367	0,517	0,341	0,578	0,416	0,537	0,644	0,378	0,359	0,484	0,225	0,504	0,543
Q60	0,383	0,341	0,424	0,390	0,316	0,243	0,293	0,718	0,289	0,302	0,342	0,415	0,246
Q58	0,318	0,238	0,338	0,324	0,303	0,214	0,239	0,667		0,246	0,238	0,338	0,249
Q59	0,491	0,467	0,418	0,586	0,408	0,370	0,459	0,645	0,457	0,343	0,361	0,376	0,319
Q13	0,289		0,312	0,251	0,367	0,200		0,608			0,297	0,300	0,214
Q23	0,273		0,285	0,361	0,202		0,248	0,388	0,203	0,325		0,263	0,308
Q55	0,250		0,224	0,369	0,256		0,226	0,376	0,249	0,211			0,244
Q52	0,265	0,379	0,232	0,407	0,271	0,299	0,432	0,264	0,812	0,285	0,215	0,259	0,249
Q53	0,293	0,591	0,277	0,501	0,372	0,377	0,508	0,319	0,782	0,389	0,298	0,360	0,359
Q50		0,407		0,387	0,246	0,258	0,365		0,678	0,273		0,207	0,242
Q51		0,324		0,383	0,233	0,295	0,342		0,623	0,222	0,200	0,210	0,222
Q92	0,366	0,510	0,460	0,624	0,332	0,401	0,516	0,354	0,377	0,830	0,243	0,486	0,439
Q93	0,321	0,523	0,382	0,622	0,351	0,460	0,514	0,312	0,408	0,751	0,245	0,463	0,465
Q91	0,408	0,482	0,486	0,597	0,280	0,332	0,508	0,367	0,355	0,749	0,257	0,479	0,428
Q90	0,346	0,418	0,482	0,602	0,313	0,346	0,475	0,402	0,337	0,702	0,201	0,429	0,454
Q89	0,334	0,388	0,484	0,519	0,244	0,224	0,419	0,384	0,287	0,581		0,395	0,403
Q17	0,349	0,317	0,490	0,256	0,236		0,212	0,408	0,226	0,248	0,753	0,389	
Q16	0,398	0,280	0,543	0,286	0,239		0,215	0,414	0,207	0,240	0,730	0,396	
Q79	0,415	0,417	0,510	0,491	0,367	0,343	0,441	0,419	0,311	0,432	0,345	0,703	0,356
Q80	0,491	0,418	0,532	0,505	0,334	0,329	0,437	0,457	0,317	0,410	0,427	0,696	0,334
Q78	0,358	0,385	0,576	0,401	0,283	0,277	0,313	0,447	0,301	0,365	0,463	0,592	0,233
Q82	0,293	0,513	0,319	0,546	0,380	0,480	0,481	0,293	0,349	0,502	0,222	0,548	0,436
Q35	0,256	0,300	0,296	0,313	0,438	0,372	0,299	0,498	0,248	0,249	0,320	0,505	0,334
Q68		0,421	0,281	0,394	0,389	0,361	0,356	0,326	0,257	0,343		0,457	0,360
Q39	0,383	0,548	0,278	0,580	0,480	0,581	0,524	0,313	0,374	0,441	0,237	0,411	0,760
Q30	0,260	0,438		0,498	0,529	0,645	0,477	0,243	0,321	0,314		0,321	0,702
Q29	0,443	0,483	0,269	0,516	0,537	0,627	0,476	0,305	0,310	0,328	0,287	0,356	0,677

Structure Matrix													
	Factor												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Q40	0,421	0,509	0,314	0,646	0,413	0,550	0,636	0,340	0,389	0,461	0,226	0,430	0,673
Q22		0,270		0,327	0,276		0,277	0,203	0,297	0,273			0,327
Extraction Method: Principal Axis Factoring. **Rotation Method: Promax with Kaiser Normalization.**													

Factor Correlation Matrix													
Factor	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**
1	1,000	0,330	0,503	0,542	0,325	0,311	0,464	0,486	0,302	0,338	0,405	0,394	0,379
2	0,330	1,000	0,377	0,659	0,553	0,549	0,603	0,314	0,537	0,480	0,403	0,470	0,468
3	0,503	0,377	1,000	0,498	0,276	0,220	0,389	0,544	0,259	0,516	0,426	0,539	0,286
4	0,542	0,659	0,498	1,000	0,491	0,554	0,713	0,486	0,554	0,598	0,343	0,501	0,548
5	0,325	0,553	0,276	0,491	1,000	0,589	0,422	0,451	0,367	0,283	0,318	0,416	0,531
6	0,311	0,549	0,220	0,554	0,589	1,000	0,572	0,293	0,391	0,327	0,339	0,400	0,490
7	0,464	0,603	0,389	0,713	0,422	0,572	1,000	0,366	0,536	0,521	0,272	0,475	0,549
8	0,486	0,314	0,544	0,486	0,451	0,293	0,366	1,000	0,349	0,391	0,378	0,553	0,347
9	0,302	0,537	0,259	0,554	0,367	0,391	0,536	0,349	1,000	0,367	0,320	0,315	0,312
10	0,338	0,480	0,516	0,598	0,283	0,327	0,521	0,391	0,367	1,000	0,176	0,573	0,495
11	0,405	0,403	0,426	0,343	0,318	0,339	0,272	0,378	0,320	0,176	1,000	0,339	0,148
12	0,394	0,470	0,539	0,501	0,416	0,400	0,475	0,553	0,315	0,573	0,339	1,000	0,487
13	0,379	0,468	0,286	0,548	0,531	0,490	0,549	0,347	0,312	0,495	0,148	0,487	1,000
Extraction Method: Principal Axis Factoring. **Rotation Method: Promax with Kaiser Normalization.**													

ANNEXURE 4: EXPLORATORY FACTOR ANALYSIS – 2016 SAMPLE

UNRESTRICTED – Q22, Q23, Q55 excluded based on low communalities <0.3

Communalities		
	Initial	Extraction
Q9	0,708	0,728
Q10	0,646	0,656
Q11	0,701	0,737
Q12	0,756	0,757
Q13	0,395	0,409
Q14	0,477	0,444
Q15	0,709	0,679
Q16	0,592	0,629
Q17	0,598	0,659
Q18	0,500	0,494
Q19	0,740	0,728
Q20	0,373	0,325
Q21	0,616	0,609
Q24	0,417	0,390
Q25	0,508	0,486
Q26	0,836	0,811
Q27	0,794	0,794
Q28	0,834	0,839
Q29	0,640	0,586
Q30	0,652	0,581
Q31	0,800	0,751
Q32	0,818	0,802
Q33	0,869	0,872
Q34	0,584	0,572
Q35	0,430	0,385
Q36	0,616	0,606
Q37	0,543	0,496
Q38	0,779	0,757
Q39	0,632	0,579
Q40	0,619	0,570
Q41	0,573	0,521
Q42	0,772	0,692
Q43	0,774	0,676
Q44	0,324	0,284
Q45	0,550	0,539
Q46	0,654	0,650
Q47	0,732	0,786
Q48	0,742	0,780
Q49	0,647	0,640
Q50	0,438	0,471

Communalities		
	Initial	Extraction
Q51	0,379	0,406
Q52	0,561	0,673
Q53	0,627	0,657
Q54	0,490	0,468
Q56	0,444	0,412
Q57	0,461	0,413
Q58	0,430	0,463
Q59	0,544	0,555
Q60	0,503	0,554
Q61	0,402	0,296
Q62	0,666	0,682
Q63	0,614	0,608
Q64	0,711	0,705
Q65	0,694	0,695
Q66	0,677	0,701
Q67	0,366	0,305
Q68	0,352	0,306
Q69	0,628	0,616
Q70	0,636	0,645
Q71	0,493	0,479
Q72	0,525	0,540
Q73	0,569	0,526
Q74	0,588	0,565
Q75	0,547	0,475
Q76	0,591	0,534
Q77	0,456	0,429
Q78	0,506	0,495
Q79	0,550	0,551
Q80	0,598	0,586
Q81	0,522	0,500
Q82	0,496	0,459
Q83	0,698	0,690
Q84	0,738	0,756
Q85	0,663	0,695
Q86	0,712	0,736
Q87	0,612	0,600
Q88	0,623	0,610
Q89	0,455	0,424
Q90	0,542	0,570
Q91	0,579	0,615
Q92	0,674	0,709
Q93	0,636	0,618
Extraction Method: Principal Axis Factoring.		

Factor	Total Variance Explained						
	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	27,915	34,043	34,043	27,520	33,561	33,561	16,734
2	6,326	7,715	41,758	6,018	7,339	40,900	18,220
3	3,715	4,531	46,288	3,380	4,122	45,021	13,486
4	3,050	3,719	50,008	2,632	3,210	48,232	17,571
5	2,312	2,820	52,827	1,904	2,322	50,553	21,416
6	1,872	2,283	55,110	1,427	1,741	52,294	17,098
7	1,653	2,015	57,125	1,253	1,528	53,822	13,240
8	1,406	1,715	58,840	0,997	1,216	55,038	11,191
9	1,275	1,554	60,394	0,877	1,070	56,108	13,159
10	1,179	1,438	61,832	0,749	0,913	57,021	15,081
11	1,152	1,405	63,237	0,713	0,869	57,890	9,771
12	1,038	1,265	64,503	0,621	0,758	58,648	13,131
13	0,972	1,186	65,688				
14	0,945	1,152	66,841				
15	0,897	1,094	67,935				
16	0,846	1,032	68,966				
17	0,798	0,973	69,940				
18	0,774	0,944	70,884				
19	0,751	0,916	71,800				
20	0,736	0,897	72,697				
21	0,678	0,826	73,523				
22	0,668	0,815	74,338				

Factor	Total Variance Explained Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
23	0,647	0,789	75,128				
24	0,636	0,776	75,904				
25	0,615	0,750	76,654				
26	0,596	0,727	77,381				
27	0,577	0,703	78,085				
28	0,571	0,697	78,781				
29	0,564	0,688	79,470				
30	0,557	0,679	80,148				
31	0,530	0,647	80,795				
32	0,522	0,637	81,432				
33	0,518	0,631	82,064				
34	0,502	0,613	82,676				
35	0,485	0,591	83,268				
36	0,473	0,576	83,844				
37	0,468	0,570	84,414				
38	0,464	0,565	84,980				
39	0,441	0,538	85,518				
40	0,432	0,527	86,046				
41	0,428	0,522	86,568				
42	0,422	0,514	87,082				
43	0,417	0,508	87,591				
44	0,403	0,492	88,082				
45	0,392	0,478	88,560				
46	0,387	0,472	89,033				

Factor	Total Variance Explained Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
47	0,383	0,467	89,500				
48	0,380	0,463	89,963				
49	0,378	0,461	90,424				
50	0,362	0,442	90,866				
51	0,344	0,420	91,286				
52	0,339	0,414	91,700				
53	0,329	0,402	92,101				
54	0,319	0,389	92,490				
55	0,318	0,387	92,877				
56	0,304	0,371	93,248				
57	0,297	0,363	93,610				
58	0,285	0,347	93,958				
59	0,281	0,342	94,300				
60	0,275	0,335	94,636				
61	0,264	0,321	94,957				
62	0,260	0,317	95,274				
63	0,257	0,313	95,587				
64	0,254	0,309	95,896				
65	0,249	0,304	96,200				
66	0,242	0,295	96,495				
67	0,233	0,284	96,779				
68	0,230	0,280	97,059				
69	0,224	0,274	97,332				
70	0,217	0,264	97,597				

Factor	Total Variance Explained						
	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
71	0,214	0,260	97,857				
72	0,201	0,246	98,103				
73	0,198	0,242	98,345				
74	0,188	0,230	98,574				
75	0,182	0,222	98,796				
76	0,177	0,216	99,011				
77	0,171	0,208	99,219				
78	0,165	0,202	99,421				
79	0,139	0,170	99,591				
80	0,125	0,152	99,743				
81	0,111	0,136	99,879				
82	0,099	0,121	100,000				
Extraction Method: Principal Axis Factoring.							
a. When factors are correlated, sums of squared loadings cannot be added to obtain a total variance.							

Factor Matrix[a]												
	Factor											
	1	2	3	4	5	6	7	8	9	10	11	12
Q64	0,675	0,282		0,335								
Q40	0,675											
Q49	0,670			-0,204				-0,210				
Q48	0,669	0,207		-0,255			-0,286	-0,207				
Q70	0,666			-0,224			0,212					
Q74	0,662											
Q38	0,659	-0,510	-0,226									
Q19	0,658	-0,461	-0,218									
Q41	0,657											
Q92	0,657			-0,269								-0,317
Q39	0,654	0,208										
Q69	0,653						0,256					
Q11	0,652			0,365					-0,296			
Q88	0,650	-0,391										
Q47	0,644			-0,286		0,247	-0,250	-0,243				
Q59	0,641						0,224					
Q91	0,640			-0,276								-0,261
Q93	0,639			-0,229								-0,228
Q9	0,636			0,433					-0,235			
Q80	0,636									-0,264		
Q32	0,635	-0,536	-0,290									
Q33	0,634	-0,590	-0,321									
Q54	0,631											
Q29	0,631		-0,240									
Q76	0,624	0,230										
Q12	0,621	-0,522	-0,270									

Factor Matrix[a]												
	Factor											
	1	2	3	4	5	6	7	8	9	10	11	12
Q37	0,621	0,221										
Q28	0,621	-0,590	-0,299									
Q79	0,616									-0,295		
Q66	0,610	0,380			-0,318	-0,220						
Q90	0,609			-0,229								-0,206
Q72	0,606			-0,205			0,218					
Q46	0,604			-0,243		0,234	-0,211	-0,224				
Q81	0,603				-0,205							
Q26	0,601	-0,588	-0,297									
Q75	0,597											
Q82	0,596											
Q34	0,594	0,352			-0,219							
Q31	0,593	-0,532	-0,300									
Q65	0,592	0,385			-0,336							
Q10	0,591	0,201		0,383					-0,287			
Q36	0,588	0,289		0,345								
Q45	0,587				0,222							
Q56	0,585											
Q53	0,585	0,231			-0,294	0,321		0,205				
Q62	0,583	0,302			-0,432							
Q42	0,582	0,282	-0,210		0,304		-0,240					
Q43	0,580	0,320			0,256		-0,227					
Q71	0,570			-0,208			0,245					
Q77	0,569											
Q86	0,567	-0,261	0,512									
Q73	0,565		0,376									

Factor Matrix[a]												
	Factor											
	1	2	3	4	5	6	7	8	9	10	11	12
Q14	0,565											
Q87	0,564	-0,324	0,382									
Q57	0,564											
Q25	0,562	0,213									0,246	
Q21	0,561	0,238		0,443								
Q84	0,560	-0,282	0,499									
Q30	0,557	0,298	-0,237		0,236							
Q15	0,549	-0,541	-0,257									
Q78	0,544		0,361									
Q24	0,543	-0,225										
Q89	0,540			-0,218								
Q63	0,535				-0,442							
Q85	0,528	-0,212	0,506									
Q83	0,524	-0,259	0,496									
Q60	0,512		0,204				0,254	-0,218				
Q18	0,510			0,388								
Q68	0,467											
Q35	0,467			0,270								
Q67	0,461	0,234										
Q16	0,460	-0,289	0,361								0,318	
Q61	0,451					0,249						
Q17	0,437	-0,238	0,385								0,319	
Q58	0,422						0,259	-0,243		0,210		
Q50	0,398	0,220			-0,245	0,325		0,240				
Q13	0,379			0,294			0,205					
Q51	0,375					0,335		0,272				

Factor Matrix[a]												
	Factor											
	1	2	3	4	5	6	7	8	9	10	11	12
Q44	0,317				0,310							
Q27	0,594	-0,607	-0,254									
Q20	0,353			0,354								
Q52	0,462				-0,219	0,483		0,332				
Extraction Method: Principal Axis Factoring.												
a. 12 factors extracted. 9 iterations required.												

a. Reproduced communalities

b. Residuals are computed between observed and reproduced correlations. There are 44 (1,0%) nonredundant residuals with absolute values greater than 0.05.

Pattern Matrix[a]												
	Factor											
	1	2	3	4	5	6	7	8	9	10	11	12
Q33	0,985											
Q28	0,960											
Q26	0,950											
Q32	0,920											
Q31	0,908											
Q27	0,904											

Pattern Matrix[a]												
	Factor											
	1	2	3	4	5	6	7	8	9	10	11	12
Q12	0,863											
Q38	0,826											
Q15	0,805											
Q19	0,745											
Q88	0,599											
Q62		0,957										
Q63		0,905										
Q65		0,900										
Q66		0,890										
Q34		0,597										
Q37		0,493										
Q64		0,479					0,447					
Q76		0,388			0,339							0,268
Q81		0,380										0,356
Q67		0,349										
Q14		0,319										
Q84			0,894									
Q83			0,867									
Q85			0,865									
Q86			0,840									
Q87			0,601									
Q73			0,434									
Q24			0,229									
Q42				0,951								
Q43				0,925								
Q30				0,712								

Pattern Matrix[a]												
	Factor											
	1	2	3	4	5	6	7	8	9	10	11	12
Q29	0,215			0,656								
Q39				0,572								
Q36				0,512			0,251					
Q44		-0,229		0,503								
Q40				0,407	0,258							
Q70					0,876							
Q69					0,859							
Q72					0,810							
Q71					0,717							
Q77					0,525							
Q74					0,406				0,259			
Q56					0,403							
Q75		0,239			0,390							0,285
Q57					0,353							
Q54					0,327				0,264			
Q25				0,272	0,313				-0,207			
Q47						0,944						
Q48						0,887						
Q46						0,834						
Q49						0,646						
Q45						0,612						
Q41				0,269		0,310						
Q11							0,793					
Q10							0,788					
Q9							0,786					
Q21				0,333			0,538					

Pattern Matrix[a]												
	Factor											
	1	2	3	4	5	6	7	8	9	10	11	12
Q18							0,434				0,330	
Q52								0,877				
Q50								0,665				
Q53		0,237						0,658				
Q51								0,634				
Q58									0,747			
Q60									0,738			
Q13									0,619			
Q59					0,222				0,505			
Q35									0,305			0,283
Q20		-0,202		0,209			0,259		0,260		0,226	
Q61						0,242			0,258			
Q92										0,774		
Q91										0,649		
Q93										0,621		
Q90					0,219					0,590		
Q89										0,418		
Q17											0,735	
Q16			0,224								0,665	
Q79												0,582
Q80												0,569
Q78			0,291									0,393
Q82				0,207								0,316
Q68												0,241
Extraction Method: Principal Axis Factoring. **Rotation Method: Promax with Kaiser Normalization.[a]**												

Pattern Matrix[a]												
	Factor											
	1	2	3	4	5	6	7	8	9	10	11	12
a. Rotation converged in 12 iterations.												

Structure Matrix												
	Factor											
	1	2	3	4	5	6	7	8	9	10	11	12
Q33	0,931	0,301	0,419	0,352	0,470	0,411	0,273	0,270	0,412	0,352	0,407	0,329
Q28	0,913	0,287	0,426	0,336	0,459	0,389	0,278	0,264	0,450	0,328	0,371	0,327
Q26	0,893	0,254	0,402	0,337	0,430	0,379	0,256	0,259	0,416	0,332	0,390	0,356
Q32	0,892	0,341	0,427	0,364	0,470	0,412	0,298	0,278	0,406	0,335	0,416	0,315
Q27	0,885	0,241	0,447	0,302	0,457	0,373	0,213	0,247	0,429	0,326	0,370	0,330
Q12	0,864	0,319	0,431	0,355	0,469	0,395	0,343	0,248	0,417	0,303	0,404	0,302
Q38	0,864	0,340	0,464	0,380	0,505	0,445	0,286	0,280	0,478	0,397	0,382	0,397
Q31	0,853	0,260	0,370	0,358	0,421	0,379	0,277	0,264	0,404	0,331	0,366	0,381
Q19	0,832	0,361	0,427	0,398	0,511	0,405	0,398	0,298	0,472	0,326	0,506	0,362
Q15	0,814	0,239	0,402	0,280	0,447	0,350	0,244	0,220	0,385	0,258	0,369	0,234
Q88	0,737	0,354	0,526	0,380	0,534	0,447	0,300	0,258	0,447	0,473	0,322	0,435
Q66	0,223	0,825	0,292	0,495	0,533	0,459	0,500	0,401	0,287	0,455	0,248	0,379
Q65	0,221	0,815	0,256	0,498	0,511	0,444	0,526	0,398	0,279	0,386	0,238	0,345
Q62	0,257	0,814	0,280	0,420	0,507	0,449	0,381	0,438	0,279	0,407	0,345	0,321
Q63	0,252	0,734	0,337	0,321	0,414	0,365	0,333	0,395	0,340	0,365	0,415	0,353
Q34	0,231	0,719	0,234	0,556	0,477	0,452	0,559	0,423	0,317	0,395	0,347	0,387
Q37	0,324	0,674	0,332	0,527	0,551	0,495	0,447	0,395	0,313	0,460	0,378	0,333

Structure Matrix												
	Factor											
	1	2	3	4	5	6	7	8	9	10	11	12
Q76	0,296	0,651	0,343	0,448	0,627	0,519	0,361	0,418	0,301	0,525	0,263	0,505
Q81	0,352	0,609	0,372	0,390	0,526	0,476	0,317	0,434	0,298	0,473	0,386	0,541
Q14	0,331	0,584	0,276	0,496	0,534	0,482	0,419	0,401	0,239	0,329	0,405	0,226
Q67		0,517	0,249	0,366	0,437	0,341	0,368	0,314	0,236	0,378		0,347
Q84	0,420	0,336	0,867	0,260	0,406	0,333	0,242	0,236	0,452	0,452	0,418	0,443
Q86	0,409	0,354	0,852	0,275	0,406	0,333	0,259	0,234	0,447	0,445	0,457	0,496
Q83	0,383	0,323	0,826	0,242	0,378	0,288	0,232	0,249	0,425	0,411	0,418	0,417
Q85	0,351	0,326	0,825	0,259	0,384	0,316	0,260	0,202	0,415	0,463	0,361	0,448
Q87	0,482	0,317	0,751	0,262	0,409	0,330	0,255		0,490	0,424	0,414	0,522
Q73	0,404	0,378	0,658	0,310	0,463	0,324	0,258	0,276	0,489	0,383	0,506	0,521
Q24	0,466	0,308	0,530	0,316	0,459	0,376	0,246	0,231	0,477	0,431	0,367	0,419
Q42	0,287	0,449	0,223	0,816	0,492	0,540	0,468	0,349	0,283	0,398	0,207	0,338
Q43	0,259	0,485	0,209	0,807	0,494	0,525	0,473	0,363	0,274	0,390	0,212	0,353
Q30	0,272	0,453		0,750	0,534	0,462	0,517	0,328	0,270	0,393	0,219	0,255
Q29	0,453	0,498	0,256	0,733	0,549	0,461	0,527	0,319	0,330	0,404	0,322	0,295
Q39	0,396	0,566	0,262	0,721	0,617	0,508	0,470	0,378	0,330	0,512	0,284	0,339
Q36	0,245	0,493	0,217	0,709	0,467	0,417	0,651	0,320	0,445	0,366	0,284	0,478
Q40	0,431	0,529	0,298	0,675	0,670	0,623	0,401	0,394	0,349	0,532	0,278	0,370
Q44			0,205	0,417	0,203	0,211	0,294		0,330	0,246		0,346
Q70	0,406	0,502	0,343	0,531	0,795	0,574	0,373	0,392	0,373	0,541	0,246	0,390
Q69	0,408	0,467	0,389	0,491	0,766	0,516	0,373	0,358	0,410	0,548	0,219	0,431
Q72	0,362	0,490	0,318	0,459	0,724	0,482	0,348	0,357	0,311	0,520	0,229	0,378
Q71	0,316	0,435	0,311	0,422	0,674	0,469	0,326	0,417	0,346	0,501	0,207	0,365
Q77	0,334	0,523	0,283	0,463	0,634	0,488	0,339	0,396	0,228	0,439	0,262	0,284
Q74	0,529	0,420	0,575	0,415	0,612	0,410	0,330	0,302	0,603	0,476	0,402	0,536
Q75	0,294	0,561	0,354	0,431	0,611	0,480	0,318	0,369	0,341	0,534	0,251	0,518
Q54	0,494	0,436	0,398	0,440	0,606	0,512	0,323	0,431	0,522	0,418	0,318	0,410

Structure Matrix												
	Factor											
	1	2	3	4	5	6	7	8	9	10	11	12
Q56	0,347	0,511	0,289	0,459	0,601	0,483	0,411	0,485	0,348	0,392	0,296	0,322
Q57	0,311	0,496	0,244	0,531	0,577	0,459	0,441	0,439	0,363	0,355	0,271	0,249
Q25	0,331	0,545	0,218	0,570	0,571	0,491	0,436	0,376		0,339	0,368	
Q82	0,298	0,519	0,310	0,536	0,556	0,475	0,376	0,358	0,312	0,543	0,246	0,532
Q47	0,380	0,518	0,290	0,530	0,601	0,883	0,333	0,496	0,310	0,468	0,262	0,351
Q48	0,389	0,553	0,309	0,576	0,611	0,879	0,379	0,480	0,286	0,494	0,256	0,382
Q46	0,385	0,460	0,293	0,493	0,568	0,801	0,303	0,445	0,325	0,416	0,275	0,310
Q49	0,364	0,588	0,351	0,541	0,594	0,772	0,379	0,446	0,348	0,532	0,256	0,487
Q45	0,377	0,401	0,312	0,538	0,551	0,699	0,342	0,310	0,309	0,426		0,407
Q41	0,375	0,527	0,330	0,618	0,600	0,637	0,410	0,368	0,398	0,535	0,257	0,466
Q61	0,294	0,303	0,304	0,325	0,427	0,436	0,218	0,396	0,400	0,301	0,280	0,258
Q9	0,369	0,555	0,289	0,579	0,501	0,404	0,842	0,340	0,447	0,355	0,323	0,391
Q11	0,387	0,569	0,303	0,587	0,551	0,441	0,833	0,384	0,398	0,361	0,315	0,340
Q10	0,313	0,524	0,301	0,531	0,476	0,399	0,796	0,335	0,388	0,323	0,312	0,341
Q64	0,323	0,713	0,328	0,601	0,527	0,452	0,747	0,421	0,489	0,402	0,311	0,446
Q21	0,269	0,463	0,223	0,645	0,425	0,341	0,744	0,327	0,399	0,306	0,312	0,404
Q18	0,281	0,375	0,273	0,459	0,357	0,297	0,599	0,283	0,483	0,291	0,497	0,429
Q52	0,267	0,388	0,228	0,334	0,398	0,432	0,261	0,811	0,264	0,309	0,235	0,260
Q53	0,297	0,598	0,271	0,432	0,504	0,505	0,368	0,784	0,332	0,423	0,318	0,350
Q50		0,412		0,294	0,385	0,364	0,242	0,678		0,298		0,202
Q51		0,327		0,313	0,380	0,342	0,226	0,625		0,245	0,201	0,208
Q60	0,385	0,350	0,423	0,292	0,387	0,288	0,308	0,290	0,732	0,319	0,366	0,416
Q58	0,321	0,250	0,333	0,272	0,322	0,234	0,293		0,670	0,266	0,271	0,331
Q59	0,493	0,476	0,413	0,418	0,576	0,457	0,400	0,460	0,654	0,383	0,392	0,375
Q13	0,290		0,308	0,251	0,250		0,363		0,617	0,204	0,326	0,296
Q35	0,260	0,306	0,295	0,421	0,327	0,290	0,434	0,254	0,523	0,274	0,334	0,496
Q20	0,213		0,214	0,366	0,207		0,425		0,434		0,361	0,322

Structure Matrix												
	Factor											
	1	2	3	4	5	6	7	8	9	10	11	12
Q92	0,372	0,520	0,449	0,479	0,631	0,509	0,328	0,386	0,364	0,835	0,277	0,466
Q91	0,414	0,497	0,474	0,424	0,600	0,502	0,273	0,358	0,366	0,766	0,303	0,459
Q93	0,328	0,531	0,375	0,531	0,633	0,507	0,345	0,416	0,330	0,759	0,265	0,438
Q90	0,353	0,435	0,470	0,446	0,607	0,467	0,304	0,340	0,400	0,725	0,250	0,402
Q89	0,341	0,407	0,470	0,335	0,522	0,412	0,235	0,284	0,372	0,606	0,227	0,370
Q17	0,348	0,319	0,493		0,255	0,210	0,238	0,229	0,421	0,252	0,780	0,402
Q16	0,398	0,283	0,546	0,222	0,290	0,212	0,241	0,213	0,429	0,253	0,756	0,400
Q79	0,418	0,425	0,505	0,407	0,497	0,436	0,366	0,316	0,434	0,461	0,375	0,704
Q80	0,492	0,428	0,526	0,391	0,504	0,433	0,330	0,322	0,466	0,438	0,462	0,702
Q78	0,359	0,389	0,576	0,309	0,401	0,311	0,282	0,306	0,461	0,382	0,485	0,605
Q68		0,428	0,275	0,420	0,408	0,349	0,387	0,263	0,344	0,371		0,442
Extraction Method: Principal Axis Factoring. **Rotation Method: Promax with Kaiser Normalization.**												

Factor Correlation Matrix												
Factor	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
1	1,000	0,351	0,494	0,402	0,551	0,465	0,323	0,308	0,488	0,392	0,454	0,378
2	0,351	1,000	0,381	0,608	0,694	0,609	0,571	0,559	0,374	0,558	0,411	0,464
3	0,494	0,381	1,000	0,281	0,483	0,376	0,262	0,260	0,538	0,513	0,483	0,537
4	0,402	0,608	0,281	1,000	0,673	0,637	0,665	0,445	0,422	0,525	0,341	0,448
5	0,551	0,694	0,483	0,673	1,000	0,716	0,491	0,550	0,491	0,678	0,386	0,488
6	0,465	0,609	0,376	0,637	0,716	1,000	0,397	0,544	0,373	0,566	0,300	0,438
7	0,323	0,571	0,262	0,665	0,491	0,397	1,000	0,361	0,467	0,327	0,354	0,401
8	0,308	0,559	0,260	0,445	0,550	0,544	0,361	1,000	0,353	0,398	0,345	0,324
9	0,488	0,374	0,538	0,422	0,491	0,373	0,467	0,353	1,000	0,406	0,463	0,572
10	0,392	0,558	0,513	0,525	0,678	0,566	0,327	0,398	0,406	1,000	0,255	0,561

11	0,454	0,411	0,483	0,341	0,386	0,300	0,354	0,345	0,463	0,255	1,000	0,386
12	0,378	0,464	0,537	0,448	0,488	0,438	0,401	0,324	0,572	0,561	0,386	1,000
Extraction Method: Principal Axis Factoring. **Rotation Method: Promax with Kaiser Normalization.**												

ANNEXURE 5: EXPLORATORY FACTOR ANALYSIS – 2016 SAMPLE UNRESTRICTED – Q14, Q18, Q20, Q21, Q24, Q25, Q35, Q40, Q41, Q44, Q54, Q56, Q57, Q61, Q64, Q67, Q68,Q74, Q76, Q78, Q79, Q80, Q81, Q82 - excluded based on high cross loadings

Communalities		
	Initial	**Extraction**
Q9	0,673	0,714
Q10	0,636	0,681
Q11	0,682	0,750
Q12	0,752	0,757
Q13	0,361	0,420
Q15	0,700	0,668
Q16	0,579	0,453
Q17	0,567	0,433
Q19	0,720	0,712
Q26	0,833	0,805
Q27	0,790	0,793
Q28	0,832	0,836
Q29	0,630	0,584
Q30	0,642	0,585
Q31	0,796	0,735
Q32	0,814	0,802
Q33	0,867	0,874
Q34	0,564	0,567
Q36	0,519	0,528
Q37	0,527	0,490
Q38	0,768	0,752
Q39	0,610	0,570
Q42	0,761	0,698
Q43	0,764	0,691
Q45	0,519	0,529
Q46	0,611	0,625
Q47	0,726	0,786
Q48	0,733	0,780
Q49	0,626	0,628
Q50	0,430	0,489
Q51	0,359	0,395
Q52	0,546	0,659
Q53	0,609	0,658
Q58	0,395	0,480
Q59	0,512	0,526
Q60	0,457	0,519
Q62	0,654	0,696
Q63	0,597	0,624

Q65	0,652	0,651
Q66	0,665	0,684
Q69	0,615	0,581
Q70	0,623	0,595
Q71	0,468	0,464
Q72	0,509	0,503
Q73	0,493	0,475
Q75	0,420	0,415
Q77	0,413	0,392
Q83	0,693	0,670
Q84	0,732	0,730
Q85	0,655	0,678
Q86	0,706	0,742
Q87	0,592	0,587
Q88	0,613	0,601
Q89	0,432	0,402
Q90	0,533	0,533
Q91	0,570	0,546
Q92	0,669	0,602
Q93	0,624	0,569
Extraction Method: Principal Axis Factoring.		

Total Variance Explained							
Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	20,431	35,225	35,225	20,064	34,593	34,593	13,765
2	5,603	9,661	44,886	5,301	9,139	43,732	15,155
3	3,301	5,692	50,578	2,949	5,085	48,817	10,659
4	2,312	3,987	54,565	1,918	3,307	52,124	12,123
5	1,956	3,373	57,938	1,561	2,691	54,815	11,868
6	1,574	2,715	60,653	1,188	2,048	56,863	11,951
7	1,519	2,619	63,272	1,082	1,866	58,730	8,124
8	1,313	2,263	65,535	0,904	1,559	60,288	9,463
9	1,105	1,905	67,440	0,741	1,278	61,567	9,514
10	0,986	1,699	69,139				
11	0,899	1,550	70,689				
12	0,796	1,373	72,062				
13	0,664	1,145	73,207				
14	0,648	1,117	74,324				
15	0,630	1,086	75,410				
16	0,611	1,053	76,463				
17	0,602	1,037	77,500				
18	0,591	1,018	78,519				
19	0,559	0,965	79,483				
20	0,535	0,923	80,406				
21	0,524	0,904	81,310				
22	0,507	0,875	82,185				

Total Variance Explained							
Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
23	0,474	0,817	83,002				
24	0,464	0,800	83,802				
25	0,448	0,773	84,574				
26	0,439	0,757	85,331				
27	0,428	0,738	86,069				
28	0,406	0,701	86,769				
29	0,401	0,692	87,461				
30	0,394	0,679	88,140				
31	0,388	0,668	88,808				
32	0,371	0,639	89,448				
33	0,364	0,627	90,075				
34	0,349	0,601	90,676				
35	0,344	0,594	91,270				
36	0,327	0,563	91,833				
37	0,304	0,524	92,357				
38	0,303	0,522	92,879				
39	0,288	0,497	93,376				
40	0,274	0,473	93,849				
41	0,268	0,463	94,312				
42	0,259	0,447	94,759				
43	0,249	0,430	95,189				
44	0,246	0,425	95,614				
45	0,234	0,403	96,017				

Total Variance Explained							
Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
46	0,232	0,399	96,416				
47	0,223	0,385	96,801				
48	0,220	0,379	97,180				
49	0,215	0,370	97,550				
50	0,205	0,354	97,904				
51	0,194	0,334	98,239				
52	0,187	0,322	98,560				
53	0,173	0,299	98,859				
54	0,171	0,296	99,155				
55	0,143	0,246	99,401				
56	0,132	0,228	99,628				
57	0,114	0,196	99,825				
58	0,102	0,175	100,000				
Extraction Method: Principal Axis Factoring.							
a. When factors are correlated, sums of squared loadings cannot be added to obtain a total variance.							

Factor Matrix[a]									
	Factor								
	1	2	3	4	5	6	7	8	9
Q38	0,699	-0,477							
Q19	0,690	-0,437							
Q33	0,686	-0,570							
Q32	0,681	-0,518							
Q88	0,680	-0,346							
Q28	0,671	-0,570							
Q48	0,667								
Q12	0,665	-0,506							
Q49	0,659								
Q70	0,658								
Q92	0,653								
Q26	0,648	-0,570							
Q69	0,647								
Q39	0,644								
Q47	0,644			-0,308					
Q27	0,643	-0,582							
Q91	0,641								
Q59	0,638								
Q31	0,636	-0,513							
Q11	0,635			0,372					-0,355
Q93	0,629								
Q29	0,627								
Q9	0,617			0,422					
Q37	0,609								
Q90	0,608								
Q46	0,604								
Q72	0,598								
Q15	0,594	-0,523							
Q66	0,587	0,411							
Q45	0,582								
Q86	0,576		0,570						
Q53	0,575				0,412				
Q10	0,574			0,393					-0,344
Q87	0,574		0,423						
Q75	0,573								
Q84	0,573		0,559						
Q34	0,567	0,376							
Q62	0,566	0,340			0,333				
Q65	0,565	0,403							
Q42	0,563	0,305			-0,312				
Q71	0,559								
Q77	0,559								
Q43	0,558	0,344							

Factor Matrix[a]									
	Factor								
	1	2	3	4	5	6	7	8	9
Q73	0,557		0,380						
Q36	0,547								
Q89	0,545								
Q30	0,540	0,314							
Q63	0,523				0,352				
Q60	0,505								
Q52	0,459				0,423				
Q16	0,458		0,362						
Q17	0,433		0,367						
Q58	0,415							-0,328	
Q50	0,392				0,392				
Q13	0,375						0,311		
Q51	0,363								
Q85	0,534		0,561						
Q83	0,534		0,551						
Extraction Method: Principal Axis Factoring.									
a. 9 factors extracted. 8 iterations required.									

a. Reproduced communalities

b. Residuals are computed between observed and reproduced correlations. There are 43 (2,0%) nonredundant residuals with absolute values greater than 0.05.

Pattern Matrix[a]									
	Factor								
	1	2	3	4	5	6	7	8	9
Q33	0,982								
Q28	0,941								
Q26	0,930								
Q32	0,923								
Q27	0,903								
Q31	0,877								
Q12	0,864								
Q15	0,827								
Q38	0,811								
Q19	0,772								
Q88	0,578								
Q69		0,762							
Q92		0,741							

Pattern Matrix[a]									
	Factor								
	1	2	3	4	5	6	7	8	9
Q70		0,720							
Q90		0,714							
Q72		0,709							
Q93		0,693							
Q71		0,682							
Q91		0,636							
Q89		0,543							
Q75		0,450							
Q77		0,432							
Q86			0,886						
Q84			0,873						
Q85			0,857						
Q83			0,854						
Q87			0,646						
Q73			0,524						
Q16			0,517						
Q17			0,463						
Q62				0,918					
Q63				0,875					
Q66				0,790					
Q65				0,764					
Q34				0,565					
Q37				0,487					
Q42					0,901				
Q43					0,885				
Q30					0,705				
Q29					0,643				
Q39					0,531				
Q36					0,505				
Q47						0,891			
Q48						0,839			
Q46						0,766			
Q49						0,627			
Q45						0,617			
Q52							0,850		
Q50							0,682		
Q53							0,656		
Q51							0,632		
Q11								0,787	
Q10								0,779	
Q9								0,719	
Q58									0,750
Q60									0,678
Q13									0,658
Q59									0,467

Extraction Method: Principal Axis Factoring.

Pattern Matrix[a]									
	Factor								
	1	2	3	4	5	6	7	8	9
Rotation Method: Promax with Kaiser Normalization.[a]									
a. Rotation converged in 8 iterations.									

Structure Matrix									
	Factor								
	1	2	3	4	5	6	7	8	9
Q33	0,932	0,432	0,425		0,337	0,392			0,432
Q28	0,913	0,419	0,424		0,317	0,372		0,309	0,462
Q26	0,894	0,398	0,414		0,321	0,358			0,437
Q32	0,892	0,424	0,432	0,334	0,350	0,389		0,320	0,428
Q27	0,885	0,419	0,442			0,355			0,434
Q12	0,864	0,410	0,431	0,305	0,339	0,376		0,382	0,442
Q38	0,863	0,478	0,461	0,331	0,358	0,429		0,319	0,480
Q31	0,854	0,394	0,385		0,344	0,364			0,427
Q19	0,834	0,440	0,445	0,357	0,384	0,388		0,406	0,504
Q15	0,813	0,380	0,390			0,335			0,406
Q88	0,733	0,546	0,514	0,335	0,361	0,431		0,333	0,429
Q92	0,366	0,761	0,463	0,497	0,482	0,472	0,379	0,320	0,348
Q70	0,400	0,756	0,314	0,450	0,500	0,566	0,387	0,449	0,358
Q69	0,404	0,749	0,355	0,417	0,461	0,511	0,353	0,447	0,383
Q93	0,323	0,737	0,387	0,497	0,530	0,472	0,408	0,337	0,324
Q90	0,346	0,712	0,465	0,410	0,437	0,436	0,330		0,366
Q91	0,407	0,710	0,486	0,478	0,427	0,466	0,354		0,348
Q72	0,356	0,700		0,439	0,439	0,476	0,353	0,415	0,311
Q71	0,313	0,663		0,385	0,396	0,456	0,408	0,380	0,331
Q75		0,615	0,359	0,515	0,432	0,469	0,370	0,348	0,339
Q89	0,335	0,601	0,461	0,383	0,333	0,391			0,357
Q77	0,326	0,594		0,470	0,445	0,476	0,385	0,391	
Q86	0,408	0,450	0,858	0,359		0,322			0,429
Q84	0,415	0,458	0,850	0,335		0,313			0,421
Q83	0,381	0,420	0,814	0,323					0,397
Q85	0,348	0,452	0,811	0,320		0,301			0,383
Q87	0,482	0,446	0,749	0,322		0,319			0,473
Q73	0,405	0,443	0,666	0,391		0,320			0,481
Q16	0,407		0,617	0,342					0,485
Q17	0,359		0,579	0,380					0,486
Q62		0,488	0,301	0,826	0,427	0,432	0,438	0,391	0,321
Q66		0,541	0,302	0,811	0,508	0,451	0,403	0,510	0,314
Q65		0,496		0,788	0,510	0,437	0,396	0,532	0,307
Q63		0,406	0,375	0,769	0,336	0,348	0,402	0,324	0,392
Q34		0,462		0,720	0,565	0,439	0,431	0,541	0,363
Q37	0,320	0,533	0,357	0,671	0,525	0,472	0,404	0,459	0,354
Q42		0,484		0,415	0,823	0,531	0,338	0,455	
Q43		0,482		0,452	0,822	0,523	0,355	0,462	

Structure Matrix Factor									
	1	2	3	4	5	6	7	8	9
Q30		0,509		0,417	0,754	0,451	0,328	0,514	
Q29	0,450	0,513		0,468	0,736	0,447	0,320	0,525	0,364
Q39	0,390	0,607		0,535	0,717	0,483	0,384	0,489	0,350
Q36		0,459		0,491	0,677	0,416	0,310	0,588	0,420
Q47	0,374	0,581		0,476	0,516	0,884	0,487	0,371	0,303
Q48	0,381	0,594	0,310	0,507	0,569	0,881	0,478	0,418	
Q46	0,380	0,536		0,428	0,478	0,788	0,425	0,339	0,311
Q49	0,358	0,607	0,357	0,554	0,532	0,770	0,453	0,402	0,349
Q45	0,370	0,536		0,357	0,517	0,703	0,307	0,391	
Q52		0,378		0,370	0,321	0,419	0,805		
Q53		0,489		0,584	0,437	0,487	0,789	0,369	0,355
Q50		0,367		0,397		0,350	0,693		
Q51		0,339		0,305		0,335	0,620		
Q11	0,386	0,500	0,305	0,539	0,580	0,432	0,378	0,858	0,421
Q9	0,371	0,468	0,306	0,540	0,579	0,399	0,336	0,832	0,479
Q10	0,314	0,437	0,315	0,507	0,532	0,391	0,330	0,818	0,413
Q60	0,388	0,382	0,433	0,375					0,713
Q58	0,323	0,309	0,342						0,682
Q59	0,490	0,515	0,415	0,471	0,396	0,436	0,439	0,423	0,660
Q13			0,331					0,328	0,631

Extraction Method: Principal Axis Factoring.
Rotation Method: Promax with Kaiser Normalization.

Factor Correlation Matrix									
Factor	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
1	1,000	0,490	0,495	0,337	0,380	0,435	0,302	0,362	0,518
2	0,490	1,000	0,507	0,609	0,630	0,667	0,497	0,504	0,455
3	0,495	0,507	1,000	0,423	0,289	0,348	0,272	0,268	0,543
4	0,337	0,609	0,423	1,000	0,587	0,536	0,546	0,553	0,471
5	0,380	0,630	0,289	0,587	1,000	0,605	0,429	0,629	0,381
6	0,435	0,667	0,348	0,536	0,605	1,000	0,516	0,451	0,347
7	0,302	0,497	0,272	0,546	0,429	0,516	1,000	0,359	0,356
8	0,362	0,504	0,268	0,553	0,629	0,451	0,359	1,000	0,450
9	0,518	0,455	0,543	0,471	0,381	0,347	0,356	0,450	1,000

Extraction Method: Principal Axis Factoring.
Rotation Method: Promax with Kaiser Normalization.

ANNEXURE 6: EXPLORATORY FACTOR ANALYSIS – 2016 SAMPLE

UNRESTRICTED – excluded based on low loadings <0.05

Communalities		
	Initial	Extraction
Q9	0,661	0,694
Q10	0,630	0,624
Q11	0,675	0,680
Q12	0,744	0,754
Q13	0,334	0,429
Q15	0,691	0,668
Q19	0,707	0,708
Q26	0,828	0,801
Q27	0,786	0,793
Q28	0,829	0,841
Q30	0,431	0,445
Q31	0,791	0,733
Q32	0,809	0,804
Q33	0,865	0,877
Q38	0,746	0,748
Q42	0,756	0,629
Q43	0,752	0,610
Q46	0,593	0,617
Q47	0,716	0,769
Q48	0,676	0,700
Q50	0,378	0,429
Q52	0,516	0,725
Q53	0,588	0,665
Q58	0,349	0,441
Q60	0,424	0,505
Q62	0,644	0,735
Q63	0,576	0,608
Q65	0,634	0,662
Q66	0,651	0,686
Q69	0,590	0,588
Q70	0,600	0,590
Q72	0,474	0,490
Q83	0,688	0,728
Q84	0,719	0,774
Q85	0,641	0,685
Q86	0,662	0,703
Q90	0,491	0,516
Q92	0,639	0,600

Communalities		
	Initial	Extraction
Q93	0,608	0,566
Extraction Method: Principal Axis Factoring.		

Total Variance Explained								
Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]	
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	
1	14,247	36,531	36,531	13,929	35,715	35,715	10,665	
2	4,659	11,946	48,477	4,372	11,209	46,925	9,771	
3	2,465	6,321	54,798	2,156	5,528	52,453	8,197	
4	1,798	4,611	59,408	1,430	3,667	56,121	6,694	
5	1,634	4,189	63,598	1,256	3,221	59,341	7,153	
6	1,319	3,381	66,979	0,924	2,369	61,710	7,309	
7	1,273	3,263	70,242	0,848	2,173	63,883	5,671	
8	1,088	2,791	73,032	0,703	1,803	65,686	5,076	
9	0,953	2,443	75,475					
10	0,756	1,940	77,415					
11	0,564	1,447	78,862					
12	0,538	1,380	80,242					
13	0,521	1,337	81,578					
14	0,494	1,266	82,844					
15	0,480	1,232	84,076					
16	0,454	1,163	85,239					
17	0,437	1,119	86,358					
18	0,417	1,069	87,428					
19	0,379	0,972	88,399					
20	0,337	0,864	89,263					
21	0,332	0,850	90,113					
22	0,306	0,785	90,898					
23	0,296	0,758	91,656					
24	0,277	0,711	92,368					
25	0,268	0,687	93,054					
26	0,262	0,672	93,726					
27	0,254	0,653	94,379					
28	0,239	0,613	94,992					
29	0,234	0,601	95,593					
30	0,227	0,582	96,175					
31	0,219	0,562	96,737					
32	0,207	0,530	97,267					
33	0,199	0,510	97,777					
34	0,183	0,470	98,247					
35	0,181	0,464	98,711					

Total Variance Explained							
Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
36	0,147	0,376	99,088				
37	0,135	0,347	99,434				
38	0,117	0,299	99,733				
39	0,104	0,267	100,000				
Extraction Method: Principal Axis Factoring.							
a. When factors are correlated, sums of squared loadings cannot be added to obtain a total variance.							

Factor Matrix[a]								
	Factor							
	1	2	3	4	5	6	7	8
Q33	0,748	-0,534						
Q38	0,744	-0,432						
Q32	0,740	-0,478						
Q19	0,736	-0,384						
Q28	0,736	-0,533						
Q12	0,721	-0,459						
Q26	0,708	-0,530						
Q27	0,702	-0,538						
Q31	0,690	-0,481						
Q15	0,653	-0,485						
Q48	0,639							
Q70	0,632							
Q69	0,626							
Q11	0,625			0,382				
Q47	0,624			-0,347				0,325
Q92	0,624							
Q9	0,607			0,443				
Q93	0,599							
Q46	0,590							
Q90	0,579							
Q72	0,573							
Q10	0,561			0,403				
Q53	0,554	0,330			0,363			
Q66	0,551	0,471						
Q42	0,539	0,321			-0,339			
Q62	0,538	0,407			0,386			
Q65	0,535	0,460						
Q43	0,528	0,357						
Q60	0,502							

Factor Matrix[a]								
	Factor							
	1	2	3	4	5	6	7	8
Q30	0,499							
Q63	0,496	0,323			0,390			
Q52	0,454				0,375	0,434		
Q58	0,409						0,302	0,303
Q13	0,377							
Q50	0,374				0,301			
Q84	0,567		0,641					
Q83	0,532		0,635					
Q85	0,519		0,618					
Q86	0,561		0,599					
Extraction Method: Principal Axis Factoring.								
a. 8 factors extracted. 24 iterations required.								

a. Reproduced communalities

b. Residuals are computed between observed and reproduced correlations. There are 35 (4,0%) nonredundant residuals with absolute values greater than 0.05.

Pattern Matrix[a]								
	Factor							
	1	2	3	4	5	6	7	8
Q33	0,968							
Q28	0,926							
Q26	0,913							
Q32	0,905							
Q27	0,892							
Q31	0,859							
Q12	0,850							
Q15	0,817							
Q38	0,801							
Q19	0,764							
Q69		0,787						
Q92		0,746						
Q70		0,727						
Q93		0,707						
Q72		0,687						
Q90		0,673						
Q10			0,764					
Q9			0,763					
Q11			0,763					

Pattern Matrix[a]								
	Factor							
	1	2	3	4	5	6	7	8
Q42			0,634			0,366		
Q43			0,623			0,336		
Q30			0,486					
Q84				0,863				
Q83				0,853				
Q85				0,820				
Q86				0,799				
Q62					0,888			
Q63					0,797			
Q66					0,730			
Q65					0,709			
Q47						0,859		
Q46						0,749		
Q48						0,730		
Q52							0,899	
Q53							0,673	
Q50							0,607	
Q58								0,656
Q13								0,639
Q60								0,618

Extraction Method: Principal Axis Factoring.
Rotation Method: Promax with Kaiser Normalization.[a]

a. Rotation converged in 8 iterations.

Structure Matrix								
	Factor							
	1	2	3	4	5	6	7	8
Q33	0,934	0,421	0,333	0,376		0,362		0,370
Q28	0,917	0,407	0,327	0,384		0,331		0,421
Q26	0,893	0,389	0,314	0,364		0,333		0,377
Q32	0,893	0,413	0,352	0,395		0,361		0,371
Q27	0,886	0,411		0,395		0,320		0,387
Q12	0,863	0,396	0,391	0,389		0,328		0,403
Q38	0,860	0,465	0,346	0,416		0,385		0,425
Q31	0,853	0,389	0,335	0,333		0,335		0,369
Q19	0,830	0,434	0,430	0,390	0,313	0,352		0,442
Q15	0,816	0,369		0,356				0,377
Q92	0,350	0,766	0,439	0,456	0,453	0,469	0,386	
Q69	0,393	0,760	0,467	0,350	0,400	0,462	0,349	0,327
Q70	0,387	0,759	0,490	0,307	0,425	0,530	0,373	
Q93	0,308	0,747	0,463	0,394	0,453	0,491	0,401	
Q90	0,330	0,700	0,393	0,468	0,372	0,426	0,346	0,306
Q72	0,343	0,694	0,445		0,424	0,441	0,345	
Q11	0,379	0,491	0,803		0,510	0,349	0,393	0,403
Q9	0,364	0,470	0,796		0,511	0,306	0,355	0,461
Q10	0,308	0,431	0,765		0,482	0,305	0,345	0,399
Q42		0,510	0,704		0,339	0,622		
Q43		0,508	0,703		0,374	0,607	0,302	
Q30		0,510	0,620		0,351	0,498	0,300	
Q84	0,405	0,435		0,879	0,316			0,412
Q83	0,373	0,405		0,852	0,307			0,387
Q86	0,397	0,435		0,836	0,337			0,406
Q85	0,338	0,423		0,826	0,305			0,378
Q62		0,474	0,447		0,852	0,411	0,435	
Q66		0,533	0,559		0,813	0,413	0,416	
Q65		0,494	0,579		0,793	0,401	0,405	
Q63		0,406	0,371	0,333	0,770	0,318	0,409	0,316
Q47	0,364	0,575	0,454		0,431	0,867	0,480	
Q48	0,370	0,585	0,514	0,303	0,455	0,825	0,477	
Q46	0,370	0,534	0,417		0,392	0,773	0,412	
Q52		0,370	0,319		0,339	0,410	0,841	
Q53		0,491	0,431		0,543	0,470	0,797	
Q50		0,356			0,374	0,350	0,646	
Q60	0,379	0,378		0,401	0,352			0,688
Q58	0,316	0,304		0,306				0,650
Q13			0,307	0,301				0,639

Extraction Method: Principal Axis Factoring.
Rotation Method: Promax with Kaiser Normalization.

Factor Correlation Matrix								
Factor	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
1	1,000	0,459	0,378	0,430	0,278	0,379	0,307	0,451
2	0,459	1,000	0,602	0,488	0,561	0,642	0,487	0,360
3	0,378	0,602	1,000	0,313	0,564	0,524	0,412	0,345
4	0,430	0,488	0,313	1,000	0,359	0,293	0,281	0,450
5	0,278	0,561	0,564	0,359	1,000	0,434	0,516	0,350
6	0,379	0,642	0,524	0,293	0,434	1,000	0,479	0,131
7	0,307	0,487	0,412	0,281	0,516	0,479	1,000	0,278
8	0,451	0,360	0,345	0,450	0,350	0,131	0,278	1,000
Extraction Method: Principal Axis Factoring. **Rotation Method: Promax with Kaiser Normalization.**								

ANNEXURE 7: CONFIRMATORY FACTOR ANALYSIS – REGRESSION WEIGHTS, COVARIANCES AND VARIANCES (MODEL 1)

Regression Weights: (Group number 1 - Default model)							
			Estimate	S.E.	C.R.	P	Label
Q88	<---	LS	1				
Q38	<---	LS	1,161	0,033	34,766	***	
Q33	<---	LS	1,344	0,036	37,323	***	
Q32	<---	LS	1,281	0,036	35,458	***	
Q31	<---	LS	1,124	0,034	33,52	***	
Q28	<---	LS	1,289	0,035	36,761	***	
Q27	<---	LS	1,254	0,035	35,584	***	
Q26	<---	LS	1,193	0,034	35,352	***	
Q19	<---	LS	1,221	0,036	33,461	***	
Q15	<---	LS	1,125	0,034	32,697	***	
Q12	<---	LS	1,282	0,037	34,702	***	
Q93	<---	KM_O	1				
Q92	<---	KM_O	1,016	0,029	35,003	***	
Q91	<---	KM_O	1,021	0,04	25,803	***	
Q90	<---	KM_O	1,023	0,04	25,594	***	
Q89	<---	KM_O	0,922	0,042	21,82	***	
Q72	<---	KM_O	1,072	0,042	25,813	***	
Q71	<---	KM_O	1,015	0,041	24,452	***	
Q70	<---	KM_O	1,08	0,04	27,293	***	
Q69	<---	KM_O	1,071	0,04	26,734	***	
Q10	<---	EC	0,925	0,023	39,739	***	
Q9	<---	EC	0,902	0,022	41,399	***	
Q87	<---	KM_T	1				
Q86	<---	KM_T	1,143	0,032	36,083	***	
Q85	<---	KM_T	1,055	0,031	33,679	***	
Q84	<---	KM_T	1,265	0,038	33,595	***	
Q83	<---	KM_T	1,163	0,037	31,711	***	
Q43	<---	SF	1				
Q42	<---	SF	1,009	0,022	46,508	***	
Q39	<---	SF	1,192	0,044	27,187	***	
Q36	<---	SF	1,027	0,042	24,578	***	
Q30	<---	SF	1,208	0,046	26,4	***	
Q29	<---	SF	1,233	0,047	26,031	***	
Q49	<---	CR	1				
Q48	<---	CR	1,112	0,028	40,193	***	

Regression Weights: (Group number 1 - Default model)							
			Estimate	S.E.	C.R.	P	Label
Q47	<---	CR	1,066	0,028	37,414	***	
Q46	<---	CR	0,999	0,032	31,29	***	
Q45	<---	CR	0,908	0,032	28,65	***	
Q53	<---	WE	1				
Q52	<---	WE	0,938	0,031	30,583	***	
Q51	<---	WE	0,762	0,033	22,768	***	
Q50	<---	WE	0,837	0,032	25,892	***	
Q59	<---	JS	1,079	0,045	24,034	***	
Q58	<---	JS	0,912	0,042	21,554	***	
Q13	<---	JS	0,706	0,036	19,49	***	
Q37	<---	EB	0,885	0,031	28,393	***	
Q34	<---	EB	1,027	0,033	30,947	***	
Q75	<---	KM_O	0,932	0,039	23,723	***	
Q77	<---	KM_O	0,934	0,041	22,711	***	
Q11	<---	EC	1				
Q73	<---	KM_T	0,969	0,036	26,781	***	
Q17	<---	KM_T	0,626	0,031	20,454	***	
Q16	<---	KM_T	0,689	0,031	22,285	***	
Q62	<---	EB	0,969	0,031	30,818	***	
Q63	<---	EB	0,906	0,034	26,416	***	
Q65	<---	EB	1,03	0,026	39,265	***	
Q60	<---	JS	1				
Q66	<---	EB	1				

Standardized Regression Weights: (Group number 1 - Default model)			
			Estimate
Q88	<---	LS	0,737
Q38	<---	LS	0,868
Q33	<---	LS	0,924
Q32	<---	LS	0,883
Q31	<---	LS	0,84
Q28	<---	LS	0,912
Q27	<---	LS	0,887
Q26	<---	LS	0,881
Q19	<---	LS	0,839
Q15	<---	LS	0,821
Q12	<---	LS	0,866
Q93	<---	KM_O	0,72

Standardized Regression Weights: (Group number 1 - Default model)			Estimate
Q92	<---	KM_O	0,731
Q91	<---	KM_O	0,701
Q90	<---	KM_O	0,694
Q89	<---	KM_O	0,594
Q72	<---	KM_O	0,7
Q71	<---	KM_O	0,664
Q70	<---	KM_O	0,741
Q69	<---	KM_O	0,727
Q10	<---	EC	0,835
Q9	<---	EC	0,858
Q87	<---	KM_T	0,773
Q86	<---	KM_T	0,872
Q85	<---	KM_T	0,823
Q84	<---	KM_T	0,823
Q83	<---	KM_T	0,786
Q43	<---	SF	0,707
Q42	<---	SF	0,702
Q39	<---	SF	0,776
Q36	<---	SF	0,696
Q30	<---	SF	0,756
Q29	<---	SF	0,746
Q49	<---	CR	0,807
Q48	<---	CR	0,899
Q47	<---	CR	0,853
Q46	<---	CR	0,75
Q45	<---	CR	0,695
Q53	<---	WE	0,842
Q52	<---	WE	0,776
Q51	<---	WE	0,596
Q50	<---	WE	0,667
Q59	<---	JS	0,74
Q58	<---	JS	0,647
Q13	<---	JS	0,579
Q37	<---	EB	0,709
Q34	<---	EB	0,761
Q75	<---	KM_O	0,644
Q77	<---	KM_O	0,617
Q11	<---	EC	0,874
Q73	<---	KM_T	0,678

Standardized Regression Weights: (Group number 1 - Default model)			Estimate
Q17	<---	KM_T	0,533
Q16	<---	KM_T	0,577
Q62	<---	EB	0,76
Q63	<---	EB	0,672
Q65	<---	EB	0,785
Q60	<---	JS	0,717
Q66	<---	EB	0,808

Covariances: (Group number 1 - Default model)			Estimate	S.E.	C.R.	P	Label
LS	<-->	KM_O	0,328	0,023	14,302	***	
LS	<-->	EC	0,378	0,029	13,009	***	
LS	<-->	KM_T	0,341	0,023	14,659	***	
LS	<-->	SF	0,267	0,021	12,693	***	
LS	<-->	CR	0,335	0,025	13,544	***	
LS	<-->	WE	0,29	0,028	10,258	***	
LS	<-->	JS	0,404	0,028	14,583	***	
LS	<-->	EB	0,249	0,024	10,305	***	
KM_O	<-->	EC	0,427	0,027	15,732	***	
KM_O	<-->	KM_T	0,313	0,021	15,249	***	
KM_O	<-->	SF	0,361	0,022	16,485	***	
KM_O	<-->	CR	0,444	0,025	17,542	***	
KM_O	<-->	WE	0,43	0,028	15,439	***	
KM_O	<-->	JS	0,345	0,024	14,498	***	
KM_O	<-->	EB	0,439	0,026	16,992	***	
EC	<-->	KM_T	0,301	0,025	12,171	***	
EC	<-->	SF	0,5	0,029	17,473	***	
EC	<-->	CR	0,438	0,029	15,015	***	
EC	<-->	WE	0,464	0,035	13,371	***	
EC	<-->	JS	0,455	0,031	14,603	***	
EC	<-->	EB	0,604	0,034	18,004	***	
KM_T	<-->	SF	0,185	0,017	10,703	***	
KM_T	<-->	CR	0,256	0,021	12,343	***	
KM_T	<-->	WE	0,246	0,025	10,012	***	
KM_T	<-->	JS	0,354	0,024	14,748	***	
KM_T	<-->	EB	0,278	0,022	12,597	***	
SF	<-->	CR	0,392	0,024	16,603	***	
SF	<-->	WE	0,358	0,026	13,868	***	

Covariances: (Group number 1 - Default model)							
			Estimate	S.E.	C.R.	P	Label
SF	<-->	JS	0,283	0,022	12,978	***	
SF	<-->	EB	0,428	0,025	16,933	***	
CR	<-->	WE	0,503	0,031	16,127	***	
CR	<-->	JS	0,308	0,025	12,518	***	
CR	<-->	EB	0,459	0,027	16,699	***	
WE	<-->	JS	0,36	0,03	12,007	***	
WE	<-->	EB	0,538	0,033	16,275	***	
JS	<-->	EB	0,355	0,027	13,347	***	
e26	<-->	e27	0,315	0,017	18,098	***	
e39	<-->	e38	0,342	0,018	18,809	***	
e51	<-->	e52	0,27	0,022	12,471	***	
e42	<-->	e41	0,121	0,015	8,236	***	
e35	<-->	e34	0,186	0,019	9,6	***	
e30	<-->	e29	0,196	0,016	12,005	***	
e13	<-->	e12	0,187	0,017	11,094	***	
e21	<-->	e20	0,111	0,013	8,441	***	
e22	<-->	e21	0,197	0,015	13,397	***	
e7	<-->	e4	0,179	0,012	14,943	***	
e9	<-->	e8	0,1	0,01	9,924	***	
e20	<-->	e18	0,135	0,019	7,047	***	
e53	<-->	e54	0,137	0,017	7,902	***	
e21	<-->	e19	0,083	0,013	6,13	***	
e5	<-->	e3	-0,056	0,012	-4,871	***	
e6	<-->	e5	0,046	0,01	4,679	***	

Variances: (Group number 1 - Default model)							
			Estimate	S.E.	C.R.	P	Label
LS			0,781	0,048	16,351	***	
KM_O			0,527	0,034	15,465	***	
EC			1,04	0,051	20,425	***	
KM_T			0,57	0,033	17,14	***	
SF			0,472	0,032	14,824	***	
CR			0,716	0,039	18,253	***	
WE			1,031	0,056	18,437	***	
JS			0,65	0,045	14,384	***	
EB			0,767	0,043	17,876	***	
e11			0,659	0,025	26,067	***	
e10			0,346	0,014	24,453	***	

Variances: (Group number 1 - Default model)							
			Estimate	S.E.	C.R.	P	Label
e9			0,242	0,011	21,772	***	
e8			0,36	0,015	23,601	***	
e7			0,411	0,017	24,904	***	
e6			0,263	0,012	22,284	***	
e5			0,332	0,014	22,964	***	
e4			0,322	0,013	24,04	***	
e3			0,489	0,02	24,792	***	
e2			0,478	0,019	25,299	***	
e1			0,428	0,017	24,488	***	
e22			0,489	0,02	24,237	***	
e21			0,474	0,019	24,387	***	
e20			0,57	0,023	24,59	***	
e19			0,593	0,024	24,63	***	
e18			0,822	0,032	25,589	***	
e15			0,63	0,026	24,581	***	
e14			0,69	0,028	25,039	***	
e13			0,504	0,021	23,74	***	
e12			0,541	0,023	23,99	***	
e25			0,322	0,019	17,347	***	
e24			0,388	0,019	20,206	***	
e23			0,302	0,016	18,621	***	
e33			0,385	0,016	23,542	***	
e32			0,234	0,012	19,406	***	
e31			0,302	0,014	22,017	***	
e30			0,434	0,02	21,786	***	
e29			0,477	0,021	22,839	***	
e39			0,471	0,02	23,37	***	
e38			0,493	0,021	23,465	***	
e37			0,442	0,021	21,526	***	
e36			0,529	0,022	23,672	***	
e35			0,514	0,024	21,772	***	
e34			0,573	0,026	22,057	***	
e44			0,384	0,017	22,523	***	
e43			0,209	0,013	16,592	***	
e42			0,305	0,015	20,139	***	
e41			0,556	0,024	23,334	***	
e40			0,632	0,025	24,845	***	
e48			0,423	0,027	15,632	***	
e47			0,6	0,03	19,79	***	

Variances: (Group number 1 - Default model)							
			Estimate	S.E.	C.R.	P	Label
e46			1,086	0,044	24,555	***	
e45			0,902	0,039	23,369	***	
e57			0,625	0,032	19,659	***	
e56			0,751	0,033	22,709	***	
e55			0,643	0,027	24,044	***	
e50			0,594	0,025	23,746	***	
e49			0,587	0,026	22,496	***	
e16			0,646	0,026	25,243	***	
e17			0,749	0,029	25,49	***	
e26			0,543	0,021	25,9	***	
e27			0,562	0,022	26,131	***	
e28			0,627	0,025	25,062	***	
e51			0,527	0,023	22,408	***	
e52			0,766	0,032	24,102	***	
e53			0,507	0,024	20,962	***	
e54			0,409	0,02	20,162	***	
e58			0,616	0,03	20,614	***	

ANNEXURE 8: CONFIRMATORY FACTOR ANALYSIS – REGRESSION WEIGHTS, COVARIANCES AND VARIANCES (MODEL 2)

Regression Weights: (Group number 1 - Default model)							
			Estimate	S.E.	C.R.	P	Label
Q88	<---	LS	1				
Q38	<---	LS	1,161	0,033	34,771	***	
Q33	<---	LS	1,344	0,036	37,328	***	
Q32	<---	LS	1,281	0,036	35,462	***	
Q31	<---	LS	1,124	0,034	33,521	***	
Q28	<---	LS	1,289	0,035	36,763	***	
Q27	<---	LS	1,253	0,035	35,584	***	
Q26	<---	LS	1,193	0,034	35,355	***	
Q19	<---	LS	1,22	0,036	33,458	***	
Q15	<---	LS	1,125	0,034	32,696	***	
Q12	<---	LS	1,282	0,037	34,702	***	
Q93	<---	KM_O	1				
Q92	<---	KM_O	1,009	0,029	34,825	***	
Q91	<---	KM_O	1,015	0,04	25,641	***	
Q90	<---	KM_O	1,012	0,04	25,321	***	
Q72	<---	KM_O	1,079	0,042	25,995	***	
Q71	<---	KM_O	1,015	0,041	24,475	***	
Q70	<---	KM_O	1,084	0,04	27,407	***	
Q69	<---	KM_O	1,076	0,04	26,846	***	
Q10	<---	EC	0,924	0,023	39,777	***	
Q9	<---	EC	0,899	0,022	41,359	***	
Q87	<---	KM_T	1				
Q86	<---	KM_T	1,149	0,032	35,759	***	
Q85	<---	KM_T	1,073	0,032	33,848	***	
Q84	<---	KM_T	1,274	0,038	33,393	***	
Q83	<---	KM_T	1,168	0,037	31,448	***	
Q43	<---	SF	1				
Q42	<---	SF	1,008	0,022	46,542	***	
Q39	<---	SF	1,191	0,044	27,214	***	
Q36	<---	SF	1,026	0,042	24,583	***	
Q30	<---	SF	1,207	0,046	26,422	***	
Q29	<---	SF	1,232	0,047	26,055	***	
Q49	<---	CR	1				
Q48	<---	CR	1,112	0,028	40,182	***	
Q47	<---	CR	1,066	0,028	37,412	***	

Regression Weights: (Group number 1 - Default model)							
			Estimate	S.E.	C.R.	P	Label
Q46	<---	CR	0,999	0,032	31,28	***	
Q45	<---	CR	0,908	0,032	28,646	***	
Q53	<---	WE	1				
Q52	<---	WE	0,881	0,03	29,033	***	
Q50	<---	WE	0,769	0,032	24,298	***	
Q59	<---	JS	1,205	0,052	23,13	***	
Q58	<---	JS	0,896	0,046	19,347	***	
Q37	<---	EB	0,883	0,031	28,377	***	
Q34	<---	EB	1,027	0,033	30,969	***	
Q75	<---	KM_O	0,929	0,039	23,666	***	
Q77	<---	KM_O	0,937	0,041	22,785	***	
Q11	<---	EC	1				
Q73	<---	KM_T	0,955	0,037	26,069	***	
Q62	<---	EB	0,97	0,031	30,865	***	
Q63	<---	EB	0,907	0,034	26,473	***	
Q65	<---	EB	1,031	0,026	39,318	***	
Q60	<---	JS	1				
Q66	<---	EB	1				

Standardized Regression Weights: (Group number 1 - Default model)			
			Estimate
Q88	<---	LS	0,737
Q38	<---	LS	0,868
Q33	<---	LS	0,924
Q32	<---	LS	0,884
Q31	<---	LS	0,84
Q28	<---	LS	0,912
Q27	<---	LS	0,887
Q26	<---	LS	0,881
Q19	<---	LS	0,839
Q15	<---	LS	0,821
Q12	<---	LS	0,866
Q93	<---	KM_O	0,721
Q92	<---	KM_O	0,728
Q91	<---	KM_O	0,696
Q90	<---	KM_O	0,688
Q72	<---	KM_O	0,705
Q71	<---	KM_O	0,665

Standardized Regression Weights: (Group number 1 - Default model)			Estimate
Q70	<---	KM_O	0,745
Q69	<---	KM_O	0,73
Q10	<---	EC	0,835
Q9	<---	EC	0,857
Q87	<---	KM_T	0,77
Q86	<---	KM_T	0,874
Q85	<---	KM_T	0,833
Q84	<---	KM_T	0,826
Q83	<---	KM_T	0,786
Q43	<---	SF	0,708
Q42	<---	SF	0,703
Q39	<---	SF	0,776
Q36	<---	SF	0,696
Q30	<---	SF	0,756
Q29	<---	SF	0,746
Q49	<---	CR	0,807
Q48	<---	CR	0,899
Q47	<---	CR	0,853
Q46	<---	CR	0,75
Q45	<---	CR	0,695
Q53	<---	WE	0,874
Q52	<---	WE	0,756
Q50	<---	WE	0,636
Q59	<---	JS	0,784
Q58	<---	JS	0,603
Q37	<---	EB	0,708
Q34	<---	EB	0,761
Q75	<---	KM_O	0,643
Q77	<---	KM_O	0,619
Q11	<---	EC	0,875
Q73	<---	KM_T	0,666
Q62	<---	EB	0,76
Q63	<---	EB	0,672
Q65	<---	EB	0,786
Q60	<---	JS	0,68
Q66	<---	EB	0,808

Covariances: (Group number 1 - Default model)							
			Estimate	S.E.	C.R.	P	Label
LS	<-->	KM_O	0,327	0,023	14,246	***	
LS	<-->	EC	0,378	0,029	13,012	***	
LS	<-->	KM_T	0,331	0,023	14,403	***	
LS	<-->	SF	0,267	0,021	12,696	***	
LS	<-->	CR	0,335	0,025	13,544	***	
LS	<-->	WE	0,305	0,029	10,432	***	
LS	<-->	JS	0,399	0,028	14,455	***	
LS	<-->	EB	0,249	0,024	10,302	***	
KM_O	<-->	EC	0,43	0,027	15,772	***	
KM_O	<-->	KM_T	0,306	0,02	15,013	***	
KM_O	<-->	SF	0,364	0,022	16,529	***	
KM_O	<-->	CR	0,445	0,025	17,546	***	
KM_O	<-->	WE	0,447	0,029	15,593	***	
KM_O	<-->	JS	0,348	0,024	14,535	***	
KM_O	<-->	EB	0,44	0,026	16,996	***	
EC	<-->	KM_T	0,295	0,025	11,987	***	
EC	<-->	SF	0,501	0,029	17,486	***	
EC	<-->	CR	0,439	0,029	15,02	***	
EC	<-->	WE	0,488	0,036	13,594	***	
EC	<-->	JS	0,435	0,031	14,21	***	
EC	<-->	EB	0,605	0,034	18,011	***	
KM_T	<-->	SF	0,182	0,017	10,605	***	

Covariances: (Group number 1 - Default model)							
			Estimate	S.E.	C.R.	P	Label
KM_T	<-->	CR	0,255	0,021	12,311	***	
KM_T	<-->	WE	0,254	0,025	10,02	***	
KM_T	<-->	JS	0,327	0,023	14,065	***	
KM_T	<-->	EB	0,271	0,022	12,373	***	
SF	<-->	CR	0,392	0,024	16,609	***	
SF	<-->	WE	0,373	0,027	14,023	***	
SF	<-->	JS	0,28	0,022	12,946	***	
SF	<-->	EB	0,429	0,025	16,939	***	
CR	<-->	WE	0,522	0,032	16,308	***	
CR	<-->	JS	0,319	0,025	12,954	***	
CR	<-->	EB	0,459	0,027	16,698	***	
WE	<-->	JS	0,398	0,031	12,804	***	
WE	<-->	EB	0,576	0,034	16,808	***	
JS	<-->	EB	0,365	0,027	13,664	***	
e39	<-->	e38	0,341	0,018	18,789	***	
e51	<-->	e52	0,269	0,022	12,46	***	
e42	<-->	e41	0,121	0,015	8,232	***	
e35	<-->	e34	0,186	0,019	9,606	***	
e30	<-->	e29	0,193	0,017	11,711	***	
e13	<-->	e12	0,181	0,017	10,771	***	
e21	<-->	e20	0,122	0,014	8,75	***	
e22	<-->	e21	0,198	0,015	13,492	***	
e7	<-->	e4	0,179	0,012	14,942	***	
e9	<-->	e8	0,1	0,01	9,912	***	

Covariances: (Group number 1 - Default model)							
			Estimate	S.E.	C.R.	P	Label
e53	<-->	e54	0,136	0,017	7,874	***	
e21	<-->	e19	0,083	0,014	6,121	***	
e5	<-->	e3	-0,056	0,012	-4,853	***	
e6	<-->	e5	0,046	0,01	4,691	***	

Variances: (Group number 1 - Default model)							
			Estimate	S.E.	C.R.	P	Label
LS			0,781	0,048	16,352	***	
KM_O			0,529	0,034	15,474	***	
EC			1,042	0,051	20,458	***	
KM_T			0,566	0,033	17,008	***	
SF			0,473	0,032	14,843	***	
CR			0,716	0,039	18,25	***	
WE			1,111	0,059	18,958	***	
JS			0,586	0,044	13,299	***	
EB			0,767	0,043	17,886	***	
e11			0,659	0,025	26,066	***	
e10			0,346	0,014	24,451	***	
e9			0,242	0,011	21,766	***	
e8			0,36	0,015	23,599	***	
e7			0,411	0,017	24,904	***	
e6			0,263	0,012	22,287	***	
e5			0,332	0,014	22,967	***	

Variances: (Group number 1 - Default model)							
			Estimate	S.E.	C.R.	P	Label
e4			0,322	0,013	24,04	***	
e3			0,489	0,02	24,794	***	
e2			0,478	0,019	25,3	***	
e1			0,428	0,017	24,489	***	
e22			0,487	0,02	24,141	***	
e21			0,478	0,02	24,365	***	
e20			0,579	0,024	24,536	***	
e19			0,603	0,024	24,655	***	
e15			0,621	0,025	24,422	***	
e14			0,688	0,028	24,961	***	
e13			0,498	0,021	23,54	***	
e12			0,535	0,022	23,805	***	
e25			0,32	0,019	17,227	***	
e24			0,388	0,019	20,185	***	
e23			0,304	0,016	18,68	***	
e33			0,39	0,017	23,45	***	
e32			0,232	0,012	18,89	***	
e31			0,286	0,013	21,331	***	
e30			0,429	0,02	21,401	***	
e29			0,476	0,021	22,582	***	
e39			0,47	0,02	23,355	***	
e38			0,493	0,021	23,454	***	
e37			0,442	0,021	21,527	***	
e36			0,529	0,022	23,68	***	

Variances: (Group number 1 - Default model)							
			Estimate	S.E.	C.R.	P	Label
e35			0,515	0,024	21,776	***	
e34			0,573	0,026	22,058	***	
e44			0,384	0,017	22,522	***	
e43			0,209	0,013	16,582	***	
e42			0,305	0,015	20,126	***	
e41			0,556	0,024	23,331	***	
e40			0,632	0,025	24,843	***	
e48			0,344	0,03	11,644	***	
e47			0,646	0,032	19,974	***	
e45			0,968	0,041	23,792	***	
e57			0,531	0,033	16,25	***	
e56			0,822	0,035	23,335	***	
e50			0,595	0,025	23,786	***	
e49			0,588	0,026	22,536	***	
e16			0,647	0,026	25,195	***	
e17			0,745	0,029	25,418	***	
e28			0,646	0,026	25,106	***	
e51			0,526	0,023	22,434	***	
e52			0,765	0,032	24,114	***	
e53			0,505	0,024	20,969	***	
e54			0,409	0,02	20,203	***	
e58			0,68	0,032	21,326	***	

ANNEXURE 9: CONFIRMATORY FACTOR ANALYSIS – REGRESSION WEIGHTS, COVARIANCES AND VARIANCES (MODEL 3)

Regression Weights: (Group number 1 - Default model)							
			Estimate	S.E.	C.R.	P	Label
Q38	<---	LS	1				
Q33	<---	LS	1,161	0,022	52,935	***	
Q32	<---	LS	1,105	0,023	47,865	***	
Q31	<---	LS	0,969	0,022	43,308	***	
Q28	<---	LS	1,115	0,022	51,433	***	
Q27	<---	LS	1,082	0,022	48,14	***	
Q26	<---	LS	1,029	0,022	47,552	***	
Q19	<---	LS	1,052	0,024	43,153	***	
Q15	<---	LS	0,973	0,023	41,821	***	
Q12	<---	LS	1,104	0,024	45,855	***	
Q93	<---	KM_O	1				
Q92	<---	KM_O	1,02	0,031	33,363	***	
Q90	<---	KM_O	1,029	0,043	23,749	***	
Q72	<---	KM_O	1,11	0,045	24,628	***	
Q70	<---	KM_O	1,105	0,043	25,415	***	
Q69	<---	KM_O	1,115	0,044	25,341	***	
Q10	<---	EC	0,874	0,029	30,097	***	
Q9	<---	EC	0,906	0,028	31,925	***	
Q86	<---	KM_T	1				
Q85	<---	KM_T	0,955	0,024	40,123	***	
Q84	<---	KM_T	1,114	0,029	38,109	***	
Q83	<---	KM_T	1,036	0,029	35,99	***	
Q47	<---	CR	0,998	0,027	36,724	***	
Q46	<---	CR	0,92	0,031	30,134	***	
Q53	<---	WE	1				
Q52	<---	WE	0,893	0,031	28,88	***	
Q50	<---	WE	0,776	0,032	24,221	***	
Q58	<---	JS	0,914	0,044	20,601	***	
Q13	<---	JS	0,728	0,037	19,519	***	
Q11	<---	EC	1				
Q62	<---	EB	0,925	0,033	28,27	***	
Q63	<---	EB	0,853	0,035	24,438	***	
Q65	<---	EB	1,029	0,027	38,822	***	

Regression Weights: (Group number 1 - Default model)							
			Estimate	S.E.	C.R.	P	Label
Q60	<---	JS	1				
Q66	<---	EB	1				
Q48	<---	CR	1				

Standardized Regression Weights: (Group number 1 - Default model)			
			Estimate
Q38	<---	LS	0,866
Q33	<---	LS	0,925
Q32	<---	LS	0,884
Q31	<---	LS	0,84
Q28	<---	LS	0,914
Q27	<---	LS	0,888
Q26	<---	LS	0,88
Q19	<---	LS	0,838
Q15	<---	LS	0,823
Q12	<---	LS	0,865
Q93	<---	KM_O	0,707
Q92	<---	KM_O	0,715
Q90	<---	KM_O	0,685
Q72	<---	KM_O	0,711
Q70	<---	KM_O	0,744
Q69	<---	KM_O	0,742
Q10	<---	EC	0,816
Q9	<---	EC	0,893
Q86	<---	KM_T	0,871
Q85	<---	KM_T	0,85
Q84	<---	KM_T	0,827
Q83	<---	KM_T	0,799
Q47	<---	CR	0,878
Q46	<---	CR	0,759
Q53	<---	WE	0,869
Q52	<---	WE	0,761
Q50	<---	WE	0,638
Q58	<---	JS	0,678
Q13	<---	JS	0,625
Q11	<---	EC	0,905
Q62	<---	EB	0,772
Q63	<---	EB	0,673

Standardized Regression Weights: (Group number 1 - Default model)			Estimate
Q65	<---	EB	0,835
Q60	<---	JS	0,749
Q66	<---	EB	0,86
Q48	<---	CR	0,889

Covariances: (Group number 1 - Default model)			Estimate	S.E.	C.R.	P	Label
LS	<-->	KM_O	0,365	0,026	14,21	***	
LS	<-->	EC	0,444	0,033	13,372	***	
LS	<-->	KM_T	0,398	0,028	14,219	***	
LS	<-->	CR	0,41	0,03	13,628	***	
LS	<-->	WE	0,349	0,033	10,537	***	
LS	<-->	JS	0,421	0,031	13,553	***	
LS	<-->	EB	0,26	0,029	9,088	***	
KM_O	<-->	EC	0,428	0,028	15,266	***	
KM_O	<-->	KM_T	0,327	0,023	14,486	***	
KM_O	<-->	CR	0,453	0,027	16,855	***	
KM_O	<-->	WE	0,42	0,028	14,756	***	
KM_O	<-->	JS	0,29	0,024	12,272	***	
KM_O	<-->	EB	0,416	0,026	15,873	***	
EC	<-->	KM_T	0,323	0,028	11,517	***	
EC	<-->	CR	0,463	0,032	14,442	***	
EC	<-->	WE	0,49	0,036	13,483	***	
EC	<-->	JS	0,421	0,032	13,078	***	
EC	<-->	EB	0,601	0,035	17,204	***	
KM_T	<-->	CR	0,284	0,025	11,245	***	
KM_T	<-->	WE	0,275	0,029	9,626	***	
KM_T	<-->	JS	0,369	0,027	13,621	***	
KM_T	<-->	EB	0,294	0,026	11,431	***	
CR	<-->	WE	0,572	0,035	16,463	***	
CR	<-->	JS	0,257	0,027	9,482	***	
CR	<-->	EB	0,468	0,03	15,576	***	
WE	<-->	JS	0,293	0,031	9,37	***	
WE	<-->	EB	0,565	0,035	16,102	***	
JS	<-->	EB	0,295	0,028	10,531	***	
e51	<-->	e52	0,258	0,024	10,545	***	
e42	<-->	e41	0,088	0,019	4,568	***	
e30	<-->	e29	0,178	0,018	10,044	***	

Covariances: (Group number 1 - Default model)							
			Estimate	S.E.	C.R.	P	Label
e13	<-->	e12	0,172	0,019	9,212	***	
e22	<-->	e21	0,226	0,017	13,116	***	
e7	<-->	e4	0,18	0,012	14,909	***	
e9	<-->	e8	0,097	0,01	9,617	***	
e53	<-->	e54	0,033	0,024	1,398	0,162	
e21	<-->	e19	0,108	0,015	7,089	***	
e5	<-->	e3	-0,056	0,012	-4,777	***	
e6	<-->	e5	0,042	0,01	4,306	***	
e24	<-->	e23	-0,013	0,024	-0,546	0,585	
e25	<-->	e23	-0,085	0,028	-2,997	0,003	

Variances: (Group number 1 - Default model)							
			Estimate	S.E.	C.R.	P	Label
LS			1,05	0,05	20,827	***	
KM_O			0,508	0,035	14,646	***	
EC			1,115	0,057	19,41	***	
KM_T			0,742	0,037	20,217	***	
CR			0,866	0,043	20,075	***	
WE			1,097	0,059	18,727	***	
JS			0,711	0,05	14,221	***	
EB			0,869	0,048	18,088	***	
e10			0,349	0,014	24,393	***	
e9			0,238	0,011	21,42	***	
e8			0,359	0,015	23,42	***	
e7			0,413	0,017	24,833	***	
e6			0,257	0,012	21,935	***	
e5			0,331	0,015	22,727	***	
e4			0,323	0,013	23,936	***	
e3			0,491	0,02	24,713	***	
e2			0,472	0,019	25,207	***	
e1			0,433	0,018	24,436	***	
e22			0,508	0,022	22,772	***	
e21			0,504	0,022	22,682	***	
e19			0,607	0,026	23,277	***	
e15			0,611	0,027	22,794	***	
e13			0,499	0,023	21,334	***	
e12			0,516	0,024	21,397	***	

Variances: (Group number 1 - Default model)							
			Estimate	S.E.	C.R.	P	Label
e25			0,247	0,031	8,067	***	
e24			0,427	0,027	15,621	***	
e23			0,231	0,041	5,706	***	
e32			0,236	0,014	16,952	***	
e31			0,26	0,014	18,688	***	
e30			0,424	0,022	19,593	***	
e29			0,451	0,022	20,726	***	
e43			0,229	0,019	11,885	***	
e42			0,256	0,02	12,765	***	
e41			0,538	0,027	19,579	***	
e48			0,357	0,03	11,937	***	
e47			0,634	0,032	19,531	***	
e45			0,963	0,041	23,669	***	
e56			0,698	0,035	19,874	***	
e55			0,59	0,027	21,763	***	
e51			0,504	0,026	19,136	***	
e52			0,763	0,034	22,554	***	
e53			0,401	0,03	13,325	***	
e54			0,307	0,026	11,788	***	
e58			0,555	0,034	16,343	***	

ANNEXURE 10: CONFIRMATORY FACTOR ANALYSIS – REGRESSION WEIGHTS, COVARIANCES AND VARIANCES (MODEL 2 2012)

Regression Weights: (Group number 1 - Default model)							
			Estimate	S.E.	C.R.	P	Label
Q88	<---	LS	1				
Q38	<---	LS	1,226	0,043	28,791	***	
Q33	<---	LS	1,425	0,047	30,205	***	
Q32	<---	LS	1,361	0,047	29,236	***	
Q31	<---	LS	1,115	0,042	26,438	***	
Q28	<---	LS	1,304	0,044	29,488	***	
Q27	<---	LS	1,301	0,045	28,848	***	
Q26	<---	LS	1,224	0,043	28,485	***	
Q19	<---	LS	1,28	0,048	26,842	***	
Q15	<---	LS	1,262	0,046	27,721	***	
Q12	<---	LS	1,33	0,047	28,121	***	
Q93	<---	KM_O	1				
Q92	<---	KM_O	0,99	0,032	30,848	***	
Q91	<---	KM_O	0,925	0,042	21,819	***	
Q90	<---	KM_O	0,876	0,043	20,553	***	
Q72	<---	KM_O	1,058	0,045	23,562	***	
Q71	<---	KM_O	0,985	0,045	22,067	***	
Q70	<---	KM_O	1,125	0,044	25,301	***	
Q69	<---	KM_O	1,097	0,046	23,902	***	
Q10	<---	EC	0,969	0,021	45,629	***	
Q9	<---	EC	0,97	0,02	47,992	***	
Q87	<---	KM_T	1				
Q86	<---	KM_T	0,998	0,026	38,184	***	
Q85	<---	KM_T	0,979	0,027	36,497	***	
Q84	<---	KM_T	1,049	0,031	33,732	***	
Q83	<---	KM_T	1,029	0,031	32,712	***	
Q43	<---	SF	1				
Q42	<---	SF	0,987	0,016	62,923	***	
Q39	<---	SF	0,937	0,028	33,998	***	
Q36	<---	SF	0,936	0,031	30,19	***	
Q30	<---	SF	0,992	0,028	34,842	***	
Q29	<---	SF	0,979	0,029	34,306	***	
Q49	<---	CR	1				
Q48	<---	CR	0,969	0,028	34,711	***	
Q47	<---	CR	0,982	0,03	33,018	***	

Regression Weights: (Group number 1 - Default model)							
			Estimate	S.E.	C.R.	P	Label
Q46	<---	CR	0,962	0,031	30,714	***	
Q45	<---	CR	0,914	0,034	26,717	***	
Q53	<---	WE	1				
Q52	<---	WE	0,991	0,039	25,277	***	
Q50	<---	WE	0,918	0,041	22,403	***	
Q59	<---	JS	1,406	0,081	17,437	***	
Q58	<---	JS	0,888	0,063	14,193	***	
Q37	<---	EB	0,773	0,032	24,078	***	
Q34	<---	EB	1,008	0,032	31,157	***	
Q75	<---	KM_O	0,888	0,043	20,518	***	
Q77	<---	KM_O	0,817	0,039	21,035	***	
Q11	<---	EC	1				
Q73	<---	KM_T	0,813	0,032	25,012	***	
Q62	<---	EB	0,957	0,029	32,881	***	
Q63	<---	EB	0,734	0,035	21,09	***	
Q65	<---	EB	1,063	0,024	43,467	***	
Q60	<---	JS	1				
Q66	<---	EB	1				

Standardized Regression Weights: (Group number 1 - Default model)			
			Estimate
Q88	<---	LS	0,707
Q38	<---	LS	0,875
Q33	<---	LS	0,919
Q32	<---	LS	0,89
Q31	<---	LS	0,804
Q28	<---	LS	0,897
Q27	<---	LS	0,878
Q26	<---	LS	0,866
Q19	<---	LS	0,816
Q15	<---	LS	0,843
Q12	<---	LS	0,855
Q93	<---	KM_O	0,732
Q92	<---	KM_O	0,728
Q91	<---	KM_O	0,665
Q90	<---	KM_O	0,628
Q72	<---	KM_O	0,715
Q71	<---	KM_O	0,672

Standardized Regression Weights: (Group number 1 - Default model)			Estimate
Q70	<---	KM_O	0,766
Q69	<---	KM_O	0,727
Q10	<---	EC	0,885
Q9	<---	EC	0,904
Q87	<---	KM_T	0,853
Q86	<---	KM_T	0,879
Q85	<---	KM_T	0,856
Q84	<---	KM_T	0,817
Q83	<---	KM_T	0,802
Q43	<---	SF	0,812
Q42	<---	SF	0,824
Q39	<---	SF	0,854
Q36	<---	SF	0,786
Q30	<---	SF	0,87
Q29	<---	SF	0,862
Q49	<---	CR	0,829
Q48	<---	CR	0,861
Q47	<---	CR	0,835
Q46	<---	CR	0,796
Q45	<---	CR	0,716
Q53	<---	WE	0,81
Q52	<---	WE	0,796
Q50	<---	WE	0,692
Q59	<---	JS	0,789
Q58	<---	JS	0,544
Q37	<---	EB	0,649
Q34	<---	EB	0,779
Q75	<---	KM_O	0,626
Q77	<---	KM_O	0,642
Q11	<---	EC	0,915
Q73	<---	KM_T	0,666
Q62	<---	EB	0,807
Q63	<---	EB	0,588
Q65	<---	EB	0,87
Q60	<---	JS	0,601
Q66	<---	EB	0,856

Covariances: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
LS	<-->	KM_O	0,29	0,026	10,964	***	
LS	<-->	EC	0,321	0,035	9,209	***	
LS	<-->	KM_T	0,388	0,03	12,94	***	
LS	<-->	SF	0,262	0,033	8,014	***	
LS	<-->	CR	0,275	0,03	9,203	***	
LS	<-->	WE	0,25	0,032	7,875	***	
LS	<-->	JS	0,288	0,028	10,368	***	
LS	<-->	EB	0,25	0,029	8,589	***	
KM_O	<-->	EC	0,653	0,041	15,838	***	
KM_O	<-->	KM_T	0,332	0,028	12,042	***	
KM_O	<-->	SF	0,686	0,043	16,081	***	
KM_O	<-->	CR	0,63	0,038	16,431	***	
KM_O	<-->	WE	0,5	0,036	13,725	***	
KM_O	<-->	JS	0,375	0,031	12,292	***	
KM_O	<-->	EB	0,618	0,037	16,559	***	
EC	<-->	KM_T	0,263	0,035	7,489	***	
EC	<-->	SF	1,097	0,059	18,508	***	
EC	<-->	CR	0,778	0,048	16,37	***	
EC	<-->	WE	0,478	0,045	10,619	***	
EC	<-->	JS	0,451	0,039	11,627	***	
EC	<-->	EB	0,919	0,05	18,443	***	
KM_T	<-->	SF	0,184	0,033	5,576	***	
KM_T	<-->	CR	0,245	0,03	8,108	***	
KM_T	<-->	WE	0,262	0,033	7,949	***	
KM_T	<-->	JS	0,334	0,029	11,326	***	
KM_T	<-->	EB	0,226	0,03	7,601	***	
SF	<-->	CR	0,877	0,051	17,323	***	
SF	<-->	WE	0,521	0,045	11,649	***	
SF	<-->	JS	0,397	0,036	10,887	***	
SF	<-->	EB	0,921	0,051	18,086	***	
CR	<-->	WE	0,52	0,041	12,733	***	
CR	<-->	JS	0,372	0,033	11,266	***	
CR	<-->	EB	0,733	0,043	17,195	***	
WE	<-->	JS	0,42	0,037	11,458	***	
WE	<-->	EB	0,58	0,042	13,948	***	
JS	<-->	EB	0,373	0,033	11,414	***	
e39	<-->	e38	0,44	0,026	16,749	***	
e51	<-->	e52	0,247	0,024	10,207	***	
e42	<-->	e41	0,153	0,019	8,125	***	

Covariances: (Group number 1 - Default model)							
			Estimate	S.E.	C.R.	P	Label
e35	<-->	e34	0,178	0,018	10,094	***	
e30	<-->	e29	0,258	0,019	13,537	***	
e13	<-->	e12	0,251	0,023	10,706	***	
e21	<-->	e20	0,135	0,018	7,558	***	
e22	<-->	e21	0,218	0,019	11,68	***	
e7	<-->	e4	0,183	0,016	11,743	***	
e9	<-->	e8	0,094	0,012	7,526	***	
e53	<-->	e54	0,081	0,016	5,054	***	
e21	<-->	e19	0,153	0,019	8,159	***	
e5	<-->	e3	-0,054	0,015	-3,569	***	
e6	<-->	e5	0,078	0,013	6,203	***	

Variances: (Group number 1 - Default model)							
			Estimate	S.E.	C.R.	P	Label
LS			0,739	0,055	13,522	***	
KM_O			0,636	0,046	13,877	***	
EC			1,391	0,07	19,751	***	
KM_T			0,793	0,045	17,474	***	
SF			1,234	0,076	16,272	***	
CR			0,966	0,058	16,634	***	
WE			1,045	0,07	14,974	***	
JS			0,502	0,051	9,859	***	
EB			0,949	0,055	17,419	***	
e11			0,738	0,032	22,867	***	
e10			0,339	0,016	20,984	***	
e9			0,276	0,015	18,881	***	
e8			0,361	0,018	20,13	***	
e7			0,503	0,023	22,098	***	
e6			0,304	0,015	19,954	***	
e5			0,371	0,018	20,275	***	
e4			0,369	0,017	21,173	***	
e3			0,606	0,028	21,893	***	
e2			0,481	0,022	21,674	***	
e1			0,482	0,022	21,453	***	
e22			0,55	0,026	21,204	***	
e21			0,553	0,025	21,821	***	
e20			0,688	0,031	21,998	***	

Variances: (Group number 1 - Default model)							
			Estimate	S.E.	C.R.	P	Label
e19			0,751	0,034	22,302	***	
e15			0,68	0,032	21,463	***	
e14			0,752	0,034	21,944	***	
e13			0,567	0,028	20,535	***	
e12			0,685	0,032	21,145	***	
e25			0,269	0,017	15,386	***	
e24			0,363	0,02	17,946	***	
e23			0,294	0,018	16,519	***	
e33			0,297	0,016	18,523	***	
e32			0,232	0,014	17,103	***	
e31			0,278	0,015	18,405	***	
e30			0,435	0,022	19,707	***	
e29			0,467	0,023	20,059	***	
e39			0,636	0,031	20,51	***	
e38			0,566	0,028	20,253	***	
e37			0,401	0,021	19,357	***	
e36			0,667	0,032	21,12	***	
e35			0,39	0,021	18,289	***	
e34			0,411	0,022	18,626	***	
e44			0,441	0,023	19,013	***	
e43			0,318	0,018	17,553	***	
e42			0,406	0,022	18,442	***	
e41			0,517	0,026	19,54	***	
e40			0,767	0,036	21,477	***	
e48			0,547	0,038	14,518	***	
e47			0,594	0,039	15,332	***	
e45			0,96	0,049	19,415	***	
e57			0,601	0,047	12,676	***	
e56			0,941	0,045	21,038	***	
e50			0,778	0,035	22,293	***	
e49			0,624	0,03	20,679	***	
e16			0,777	0,035	22,321	***	
e17			0,607	0,027	22,206	***	
e28			0,658	0,03	22,18	***	
e51			0,466	0,023	20,005	***	
e52			0,967	0,043	22,548	***	
e53			0,346	0,021	16,582	***	
e54			0,347	0,02	17,215	***	
e58			0,889	0,044	20,078	***	

ANNEXURE 11: CONFIRMATORY FACTOR ANALYSIS – REGRESSION WEIGHTS, COVARIANCES AND VARIANCES (MODEL 2 2014)

Regression Weights: (Group number 1 - Default model)							
			Estimate	S.E.	C.R.	P	Label
Q88	<---	LS	1				
Q38	<---	LS	1,112	0,044	25,459	***	
Q33	<---	LS	1,302	0,047	27,841	***	
Q32	<---	LS	1,227	0,048	25,813	***	
Q31	<---	LS	1,009	0,043	23,257	***	
Q28	<---	LS	1,215	0,045	26,72	***	
Q27	<---	LS	1,174	0,046	25,704	***	
Q26	<---	LS	1,091	0,044	24,828	***	
Q19	<---	LS	1,238	0,047	26,196	***	
Q15	<---	LS	1,155	0,046	25,16	***	
Q12	<---	LS	1,25	0,048	26,11	***	
Q93	<---	KM_O	1				
Q92	<---	KM_O	1,079	0,041	26,65	***	
Q91	<---	KM_O	0,996	0,058	17,25	***	
Q90	<---	KM_O	1,046	0,06	17,537	***	
Q72	<---	KM_O	1,103	0,062	17,778	***	
Q71	<---	KM_O	0,937	0,059	16,001	***	
Q70	<---	KM_O	1,094	0,058	18,837	***	
Q69	<---	KM_O	1,016	0,058	17,391	***	
Q10	<---	EC	0,93	0,034	27,49	***	
Q9	<---	EC	0,931	0,031	30,088	***	
Q87	<---	KM_T	1				
Q86	<---	KM_T	1,056	0,041	25,925	***	
Q85	<---	KM_T	1,054	0,042	24,835	***	
Q84	<---	KM_T	1,193	0,05	24,051	***	
Q83	<---	KM_T	1,152	0,049	23,589	***	
Q43	<---	SF	1				
Q42	<---	SF	0,982	0,032	30,404	***	
Q39	<---	SF	1,139	0,059	19,212	***	
Q36	<---	SF	0,895	0,055	16,191	***	
Q30	<---	SF	1,132	0,06	18,861	***	
Q29	<---	SF	1,127	0,063	17,912	***	
Q49	<---	CR	1				
Q48	<---	CR	1,07	0,036	29,446	***	
Q47	<---	CR	1,022	0,039	26,486	***	

Regression Weights: (Group number 1 - Default model)							
			Estimate	S.E.	C.R.	P	Label
Q46	<---	CR	0,993	0,043	23,176	***	
Q45	<---	CR	0,878	0,042	20,835	***	
Q53	<---	WE	1				
Q52	<---	WE	0,984	0,043	22,771	***	
Q50	<---	WE	0,894	0,046	19,516	***	
Q59	<---	JS	1,275	0,079	16,07	***	
Q58	<---	JS	0,761	0,064	11,877	***	
Q37	<---	EB	0,87	0,042	20,867	***	
Q34	<---	EB	0,979	0,045	21,886	***	
Q75	<---	KM_O	0,896	0,056	16	***	
Q77	<---	KM_O	0,79	0,053	14,968	***	
Q11	<---	EC	1				
Q73	<---	KM_T	0,898	0,049	18,309	***	
Q62	<---	EB	0,937	0,043	21,889	***	
Q63	<---	EB	0,892	0,047	18,938	***	
Q65	<---	EB	1,016	0,036	28,278	***	
Q60	<---	JS	1				
Q66	<---	EB	1				

Standardized Regression Weights: (Group number 1 - Default model)			
			Estimate
Q88	<---	LS	0,755
Q38	<---	LS	0,864
Q33	<---	LS	0,929
Q32	<---	LS	0,875
Q31	<---	LS	0,802
Q28	<---	LS	0,899
Q27	<---	LS	0,872
Q26	<---	LS	0,846
Q19	<---	LS	0,885
Q15	<---	LS	0,856
Q12	<---	LS	0,882
Q93	<---	KM_O	0,712
Q92	<---	KM_O	0,758
Q91	<---	KM_O	0,673
Q90	<---	KM_O	0,684
Q72	<---	KM_O	0,693
Q71	<---	KM_O	0,623

Standardized Regression Weights: (Group number 1 - Default model)			Estimate
Q70	<---	KM_O	0,736
Q69	<---	KM_O	0,679
Q10	<---	EC	0,814
Q9	<---	EC	0,862
Q87	<---	KM_T	0,785
Q86	<---	KM_T	0,868
Q85	<---	KM_T	0,838
Q84	<---	KM_T	0,819
Q83	<---	KM_T	0,807
Q43	<---	SF	0,685
Q42	<---	SF	0,707
Q39	<---	SF	0,798
Q36	<---	SF	0,658
Q30	<---	SF	0,784
Q29	<---	SF	0,741
Q49	<---	CR	0,826
Q48	<---	CR	0,896
Q47	<---	CR	0,832
Q46	<---	CR	0,76
Q45	<---	CR	0,699
Q53	<---	WE	0,84
Q52	<---	WE	0,817
Q50	<---	WE	0,702
Q59	<---	JS	0,806
Q58	<---	JS	0,522
Q37	<---	EB	0,718
Q34	<---	EB	0,746
Q75	<---	KM_O	0,623
Q77	<---	KM_O	0,582
Q11	<---	EC	0,883
Q73	<---	KM_T	0,653
Q62	<---	EB	0,747
Q63	<---	EB	0,667
Q65	<---	EB	0,795
Q60	<---	JS	0,647
Q66	<---	EB	0,821

Covariances: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
LS	<-->	KM_O	0,399	0,037	10,793	***	
LS	<-->	EC	0,464	0,046	10,16	***	
LS	<-->	KM_T	0,395	0,037	10,626	***	
LS	<-->	SF	0,329	0,037	8,965	***	
LS	<-->	CR	0,417	0,04	10,382	***	
LS	<-->	WE	0,326	0,044	7,417	***	
LS	<-->	JS	0,439	0,043	10,197	***	
LS	<-->	EB	0,281	0,038	7,427	***	
KM_O	<-->	EC	0,492	0,042	11,794	***	
KM_O	<-->	KM_T	0,327	0,031	10,489	***	
KM_O	<-->	SF	0,441	0,038	11,619	***	
KM_O	<-->	CR	0,481	0,039	12,437	***	
KM_O	<-->	WE	0,497	0,043	11,449	***	
KM_O	<-->	JS	0,422	0,039	10,823	***	
KM_O	<-->	EB	0,468	0,039	12	***	
EC	<-->	KM_T	0,328	0,038	8,701	***	
EC	<-->	SF	0,595	0,048	12,313	***	
EC	<-->	CR	0,524	0,045	11,569	***	
EC	<-->	WE	0,513	0,052	9,884	***	
EC	<-->	JS	0,486	0,047	10,398	***	
EC	<-->	EB	0,695	0,051	13,519	***	
KM_T	<-->	SF	0,233	0,03	7,727	***	
KM_T	<-->	CR	0,224	0,031	7,148	***	
KM_T	<-->	WE	0,205	0,037	5,549	***	
KM_T	<-->	JS	0,349	0,036	9,744	***	
KM_T	<-->	EB	0,259	0,033	7,795	***	
SF	<-->	CR	0,519	0,043	12,178	***	
SF	<-->	WE	0,472	0,045	10,408	***	
SF	<-->	JS	0,347	0,037	9,288	***	
SF	<-->	EB	0,594	0,047	12,723	***	
CR	<-->	WE	0,587	0,049	12,007	***	
CR	<-->	JS	0,412	0,04	10,195	***	
CR	<-->	EB	0,519	0,043	12,164	***	
WE	<-->	JS	0,424	0,046	9,222	***	
WE	<-->	EB	0,537	0,049	10,976	***	
JS	<-->	EB	0,412	0,041	9,94	***	
e39	<-->	e38	0,444	0,034	13,17	***	
e51	<-->	e52	0,317	0,033	9,604	***	
e42	<-->	e41	0,183	0,023	7,92	***	
e35	<-->	e34	0,175	0,029	6,129	***	

Covariances: (Group number 1 - Default model)							
			Estimate	S.E.	C.R.	P	Label
e30	<-->	e29	0,185	0,023	7,891	***	
e13	<-->	e12	0,271	0,028	9,603	***	
e21	<-->	e20	0,078	0,02	3,965	***	
e22	<-->	e21	0,239	0,023	10,39	***	
e7	<-->	e4	0,23	0,021	11,143	***	
e9	<-->	e8	0,087	0,015	5,846	***	
e53	<-->	e54	0,119	0,024	4,88	***	
e21	<-->	e19	0,089	0,02	4,394	***	
e5	<-->	e3	-0,059	0,015	-3,816	***	
e6	<-->	e5	0,069	0,016	4,402	***	

Variances: (Group number 1 - Default model)							
			Estimate	S.E.	C.R.	P	Label
LS			0,89	0,074	11,973	***	
KM_O			0,549	0,051	10,715	***	
EC			1,076	0,073	14,707	***	
KM_T			0,643	0,052	12,392	***	
SF			0,63	0,062	10,099	***	
CR			0,796	0,06	13,363	***	
WE			1,096	0,084	12,995	***	
JS			0,597	0,067	8,91	***	
EB			0,837	0,064	13,002	***	
e11			0,67	0,037	18,363	***	
e10			0,373	0,021	17,4	***	
e9			0,239	0,016	15,201	***	
e8			0,411	0,024	16,908	***	
e7			0,504	0,028	18,046	***	
e6			0,311	0,019	16,384	***	
e5			0,384	0,023	16,67	***	
e4			0,419	0,024	17,632	***	
e3			0,378	0,023	16,79	***	
e2			0,434	0,025	17,526	***	
e1			0,397	0,023	17,064	***	
e22			0,535	0,031	17,092	***	
e21			0,474	0,028	16,643	***	
e20			0,659	0,038	17,495	***	
e19			0,684	0,039	17,388	***	
e15			0,722	0,042	17,339	***	

Variances: (Group number 1 - Default model)							
			Estimate	S.E.	C.R.	P	Label
e14			0,76	0,042	17,911	***	
e13			0,556	0,033	16,769	***	
e12			0,662	0,038	17,367	***	
e25			0,304	0,026	11,802	***	
e24			0,476	0,031	15,145	***	
e23			0,321	0,025	13,078	***	
e33			0,399	0,024	16,321	***	
e32			0,236	0,017	13,742	***	
e31			0,303	0,02	14,969	***	
e30			0,449	0,029	15,282	***	
e29			0,456	0,029	15,552	***	
e39			0,714	0,042	17,093	***	
e38			0,609	0,036	16,85	***	
e37			0,467	0,031	15,113	***	
e36			0,661	0,038	17,425	***	
e35			0,505	0,033	15,199	***	
e34			0,656	0,041	16,006	***	
e44			0,372	0,024	15,409	***	
e43			0,225	0,019	12,059	***	
e42			0,369	0,025	15,052	***	
e41			0,574	0,035	16,477	***	
e40			0,642	0,037	17,517	***	
e48			0,457	0,041	11,163	***	
e47			0,53	0,043	12,37	***	
e45			0,904	0,056	16,036	***	
e57			0,525	0,05	10,534	***	
e56			0,923	0,053	17,544	***	
e50			0,595	0,035	16,839	***	
e49			0,641	0,039	16,423	***	
e16			0,695	0,039	17,911	***	
e17			0,667	0,037	18,148	***	
e28			0,699	0,039	17,861	***	
e51			0,583	0,036	16,343	***	
e52			0,831	0,048	17,28	***	
e53			0,502	0,034	14,757	***	
e54			0,405	0,029	14,086	***	
e58			0,829	0,052	15,985	***	

ANNEXURE 12: CORRELATIONS (2016 DATA)

Correlations												
		LS	KM_O	EC	KM_T	SF	CR	WE	EB	JS	Years of service	Generation	Job level
LS	Pearson Correlation	1	.481**	.393**	.488**	.398**	.440**	.283**	.305**	.488**	-0,044	0,035	0,047
	Sig. (2-tailed)		0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,095	0,187	0,074
	N	1468	1468	1468	1468	1468	1468	1468	1468	1468	1464	1463	1463
KM_O	Pearson Correlation	.481**	1	.515**	.517**	.621**	.657**	.487**	.604**	.486**	-0,049	0,038	-0,024
	Sig. (2-tailed)	0,000		0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,063	0,142	0,351
	N	1468	1468	1468	1468	1468	1468	1468	1468	1468	1464	1463	1463
EC	Pearson Correlation	.393**	.515**	1	.353**	.616**	.458**	.370**	.583**	.436**	-.082**	0,010	-.059*
	Sig. (2-tailed)	0,000	0,000		0,000	0,000	0,000	0,000	0,000	0,000	0,002	0,715	0,024
	N	1468	1468	1468	1468	1468	1468	1468	1468	1468	1464	1463	1463
KM_T	Pearson Correlation	.488**	.517**	.353**	1	.312**	.378**	.264**	.385**	.482**	0,016	0,042	0,023
	Sig. (2-tailed)	0,000	0,000	0,000		0,000	0,000	0,000	0,000	0,000	0,536	0,111	0,380
	N	1468	1468	1468	1468	1468	1468	1468	1468	1468	1464	1463	1463
SF	Pearson Correlation	.398**	.621**	.616**	.312**	1	.601**	.407**	.584**	.396**	-.209**	-.087**	-0,019
	Sig. (2-tailed)	0,000	0,000	0,000	0,000		0,000	0,000	0,000	0,000	0,000	0,001	0,477
	N	1468	1468	1468	1468	1468	1468	1468	1468	1468	1464	1463	1463
CR	Pearson Correlation	.440**	.657**	.458**	.378**	.601**	1	.484**	.538**	.391**	-.105**	-0,038	-.056*
	Sig. (2-tailed)	0,000	0,000	0,000	0,000	0,000		0,000	0,000	0,000	0,000	0,142	0,031
	N	1468	1468	1468	1468	1468	1468	1468	1468	1468	1464	1463	1463
WE	Pearson Correlation	.283**	.487**	.370**	.264**	.407**	.484**	1	.501**	.334**	-0,044	0,027	-.118**
	Sig. (2-tailed)	0,000	0,000	0,000	0,000	0,000	0,000		0,000	0,000	0,096	0,295	0,000
	N	1468	1468	1468	1468	1468	1468	1468	1468	1468	1464	1463	1463
EB	Pearson Correlation	.305**	.604**	.583**	.385**	.584**	.538**	.501**	1	.423**	-.128**	-.113**	-.286**
	Sig. (2-tailed)	0,000	0,000	0,000	0,000	0,000	0,000	0,000		0,000	0,000	0,000	0,000

	N	1468	1468	1468	1468	1468	1468	1468	1468	1468	1464	1463	1463
JS	Pearson Correlation	.488**	.486**	.436**	.482**	.396**	.391**	.334**	.423**	1	0,048	.110**	.096**
	Sig. (2-tailed)	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000		0,066	0,000	0,000
	N	1468	1468	1468	1468	1468	1468	1468	1468	1468	1464	1463	1463
Years of service	Pearson Correlation	-0,044	-0,049	-.082**	0,016	-.209**	-.105**	-0,044	-.128**	0,048	1	.576**	.132**
	Sig. (2-tailed)	0,095	0,063	0,002	0,536	0,000	0,000	0,096	0,000	0,066		0,000	0,000
	N	1464	1464	1464	1464	1464	1464	1464	1464	1464	1464	1462	1461
Generation	Pearson Correlation	0,035	0,038	0,010	0,042	-.087**	-0,038	0,027	-.113**	.110**	.576**	1	.273**
	Sig. (2-tailed)	0,187	0,142	0,715	0,111	0,001	0,142	0,295	0,000	0,000	0,000		0,000
	N	1463	1463	1463	1463	1463	1463	1463	1463	1463	1462	1463	1460
Job level	Pearson Correlation	0,047	-0,024	-.059*	0,023	-0,019	-.056*	-.118**	-.286**	.096**	.132**	.273**	1
	Sig. (2-tailed)	0,074	0,351	0,024	0,380	0,477	0,031	0,000	0,000	0,000	0,000	0,000	
	N	1463	1463	1463	1463	1463	1463	1463	1463	1463	1461	1460	1463
****. Correlation is significant at the 0.01 level (2-tailed).**													
***. Correlation is significant at the 0.05 level (2-tailed).**													

ANNEXURE 13: *T*-TEST, ANOVA AND GROUP DIFFERENCES (2016 DATA)

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
LS	1468	3,40	1,085	0,028
KM_O	1468	2,95	0,784	0,020
EC	1468	3,30	1,018	0,027
KM_T	1468	3,65	0,875	0,023
SF	1468	3,22	0,835	0,022
CR	1468	2,85	0,913	0,024
WE	1468	2,77	1,047	0,027
EB	1468	2,79	0,917	0,024
JS	1468	3,52	0,931	0,024

One-Sample Test							
	Test Value = 3						
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference		
					Lower	Upper	Effect size
LS	14,025	1467	0,000	0,40	0,34	0,45	0,37
KM_O	-2,283	1467	0,023	-0,05	-0,09	-0,01	0,06
EC	11,457	1467	0,000	0,30	0,25	0,36	0,30
KM_T	28,641	1467	0,000	0,65	0,61	0,70	0,75
SF	10,094	1467	0,000	0,22	0,18	0,26	0,26
CR	-6,427	1467	0,000	-0,15	-0,20	-0,11	0,17
WE	-8,352	1467	0,000	-0,23	-0,28	-0,17	0,22
EB	-8,930	1467	0,000	-0,21	-0,26	-0,17	0,23
JS	21,233	1467	0,000	0,52	0,47	0,56	0,55

Independent samples *t*-Test					
Group Statistics					
Gender		N	Mean	Std. Deviation	Std. Error Mean
LS	Male	732	3,4603	1,07693	0,03980
	Female	734	3,3394	1,08830	0,04017
KM_O	Male	732	2,9766	0,77764	0,02874
	Female	734	2,9324	0,79043	0,02918
EC	Male	732	3,3406	1,01424	0,03749
	Female	734	3,2734	1,01887	0,03761
KM_T	Male	732	3,6737	0,87234	0,03224
	Female	734	3,6369	0,87652	0,03235
SF	Male	732	3,2129	0,82683	0,03056
	Female	734	3,2289	0,84437	0,03117
CR	Male	732	2,8440	0,88154	0,03258
	Female	734	2,8529	0,94286	0,03480
WE	Male	732	2,7477	1,05371	0,03895
	Female	734	2,7984	1,04044	0,03840
EB	Male	732	2,8069	0,91090	0,03367
	Female	734	2,7688	0,92208	0,03403
JS	Male	732	3,6052	0,89671	0,03314
	Female	734	3,4282	0,95602	0,03529

Independent Samples Test										
		Levene's Test for Equality of Variances		*t*-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
LS	Equal variances assumed	1,003	0,317	2,138	1464	0,033	0,12090	0,05655	0,00997	0,23183
	Equal variances not assumed			2,138	1463,912	0,033	0,12090	0,05655	0,00997	0,23183
KM_O	Equal variances assumed	0,076	0,783	1,080	1464	0,281	0,04421	0,04096	-0,03612	0,12455
	Equal variances not assumed			1,080	1463,730	0,281	0,04421	0,04096	-0,03612	0,12455
EC	Equal variances assumed	0,114	0,735	1,266	1464	0,206	0,06723	0,05310	-0,03693	0,17139
	Equal variances not assumed			1,266	1463,995	0,206	0,06723	0,05310	-0,03693	0,17139
KM_T	Equal variances assumed	0,108	0,743	0,806	1464	0,421	0,03680	0,04568	-0,05279	0,12640
	Equal variances not assumed			0,806	1463,994	0,421	0,03680	0,04568	-0,05279	0,12640
SF	Equal variances assumed	0,099	0,753	-0,366	1464	0,714	-0,01600	0,04365	-0,10162	0,06963
	Equal variances not assumed			-0,366	1463,512	0,714	-0,01600	0,04365	-0,10162	0,06963
CR	Equal variances assumed	3,345	0,068	-0,186	1464	0,852	-0,00887	0,04768	-0,10240	0,08465
	Equal variances not assumed			-0,186	1457,948	0,852	-0,00887	0,04767	-0,10239	0,08464
WE	Equal variances assumed	0,476	0,490	-0,926	1464	0,355	-0,05064	0,05469	-0,15793	0,05665
	Equal variances not assumed			-0,926	1463,653	0,355	-0,05064	0,05470	-0,15793	0,05665
EB	Equal variances assumed	0,106	0,745	0,795	1464	0,427	0,03808	0,04787	-0,05583	0,13199
	Equal variances not assumed			0,795	1463,869	0,427	0,03808	0,04787	-0,05583	0,13198
JS	Equal variances assumed	5,980	0,015	3,655	1464	0,000	0,17694	0,04842	0,08197	0,27192
	Equal variances not assumed			3,655	1458,531	0,000	0,17694	0,04841	0,08198	0,27191

One sample – Years of Work									
Descriptives									
		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
LS	0 to 2 yrs	306	3,6563	1,03367	0,05909	3,5400	3,7725	1,00	5,00
	3 to 5 yrs	130	3,1986	1,19279	0,10461	2,9916	3,4056	1,00	4,91
	6 to 10 yrs	409	3,3014	1,08114	0,05346	3,1963	3,4065	1,00	5,00
	11 to 20 yrs	353	3,2913	1,10612	0,05887	3,1755	3,4071	1,00	5,00
	21 to 30 yrs	204	3,4657	0,99957	0,06998	3,3277	3,6037	1,00	5,00
	31+ yrs	62	3,6276	0,98666	0,12531	3,3770	3,8781	1,00	5,00
	Total	1464	3,4007	1,08327	0,02831	3,3452	3,4562	1,00	5,00
KM_O	0 to 2 yrs	306	3,1605	0,78023	0,04460	3,0727	3,2482	1,00	5,00
	3 to 5 yrs	130	2,8269	0,76653	0,06723	2,6939	2,9599	1,00	4,60
	6 to 10 yrs	409	2,8489	0,78995	0,03906	2,7721	2,9257	1,00	5,00
	11 to 20 yrs	353	2,8768	0,78101	0,04157	2,7950	2,9585	1,00	4,90
	21 to 30 yrs	204	3,0461	0,72202	0,05055	2,9464	3,1458	1,00	4,80
	31+ yrs	62	3,0565	0,80217	0,10188	2,8527	3,2602	1,20	4,90
	Total	1464	2,9551	0,78433	0,02050	2,9148	2,9953	1,00	5,00
EC	0 to 2 yrs	306	3,5283	1,08614	0,06209	3,4061	3,6505	1,00	5,00
	3 to 5 yrs	130	3,2795	1,00456	0,08811	3,1052	3,4538	1,00	5,00
	6 to 10 yrs	409	3,2241	0,99263	0,04908	3,1276	3,3206	1,00	5,00
	11 to 20 yrs	353	3,2663	1,01422	0,05398	3,1601	3,3725	1,00	5,00
	21 to 30 yrs	204	3,2516	0,92574	0,06482	3,1238	3,3794	1,00	5,00
	31+ yrs	62	3,2742	1,00730	0,12793	3,0184	3,5300	1,00	5,00
	Total	1464	3,3087	1,01564	0,02654	3,2567	3,3608	1,00	5,00
KM_T	0 to 2 yrs	306	3,7473	0,84416	0,04826	3,6523	3,8422	1,00	5,00
	3 to 5 yrs	130	3,5064	0,92561	0,08118	3,3458	3,6670	1,17	5,00

One sample – Years of Work									
Descriptives									
		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
	6 to 10 yrs	409	3,5738	0,92432	0,04570	3,4839	3,6636	1,00	5,00
	11 to 20 yrs	353	3,6341	0,87399	0,04652	3,5426	3,7256	1,00	5,00
	21 to 30 yrs	204	3,7949	0,74132	0,05190	3,6926	3,8973	1,00	5,00
	31+ yrs	62	3,7500	0,83946	0,10661	3,5368	3,9632	1,50	5,00
	Total	1464	3,6569	0,87212	0,02279	3,6122	3,7016	1,00	5,00
SF	0 to 2 yrs	306	3,5735	0,81087	0,04635	3,4823	3,6647	1,00	5,00
	3 to 5 yrs	130	3,2962	0,83971	0,07365	3,1504	3,4419	1,00	5,00
	6 to 10 yrs	409	3,1789	0,77806	0,03847	3,1033	3,2545	1,00	5,00
	11 to 20 yrs	353	3,0430	0,85509	0,04551	2,9535	3,1325	1,00	5,00
	21 to 30 yrs	204	3,0776	0,79344	0,05555	2,9681	3,1871	1,00	5,00
	31+ yrs	62	3,1022	0,83161	0,10561	2,8910	3,3133	1,50	5,00
	Total	1464	3,2217	0,83564	0,02184	3,1788	3,2645	1,00	5,00
CR	0 to 2 yrs	306	3,1065	0,91931	0,05255	3,0031	3,2099	1,00	5,00
	3 to 5 yrs	130	2,8508	0,89765	0,07873	2,6950	3,0065	1,00	5,00
	6 to 10 yrs	409	2,7667	0,88255	0,04364	2,6810	2,8525	1,00	5,00
	11 to 20 yrs	353	2,7275	0,89732	0,04776	2,6335	2,8214	1,00	5,00
	21 to 30 yrs	204	2,7873	0,89180	0,06244	2,6641	2,9104	1,00	4,60
	31+ yrs	62	2,9774	1,02372	0,13001	2,7174	3,2374	1,00	5,00
	Total	1464	2,8475	0,91257	0,02385	2,8008	2,8943	1,00	5,00
WE	0 to 2 yrs	306	2,9270	1,08178	0,06184	2,8053	3,0487	1,00	5,00
	3 to 5 yrs	130	2,6462	1,03326	0,09062	2,4669	2,8255	1,00	5,00
	6 to 10 yrs	409	2,7547	1,04024	0,05144	2,6536	2,8558	1,00	5,00
	11 to 20 yrs	353	2,7243	1,03634	0,05516	2,6158	2,8328	1,00	5,00

One sample – Years of Work									
Descriptives									
		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
	21 to 30 yrs	204	2,6879	0,99758	0,06984	2,5502	2,8256	1,00	5,00
	31+ yrs	62	2,9516	1,11595	0,14173	2,6682	3,2350	1,00	5,00
	Total	1464	2,7728	1,04772	0,02738	2,7191	2,8265	1,00	5,00
EB	0 to 2 yrs	306	3,0458	1,02842	0,05879	2,9301	3,1614	1,00	5,00
	3 to 5 yrs	130	2,8487	0,85827	0,07528	2,6998	2,9977	1,00	4,83
	6 to 10 yrs	409	2,7363	0,90182	0,04459	2,6487	2,8240	1,00	5,00
	11 to 20 yrs	353	2,6572	0,85911	0,04573	2,5673	2,7472	1,00	5,00
	21 to 30 yrs	204	2,6789	0,82847	0,05800	2,5646	2,7933	1,00	5,00
	31+ yrs	62	2,8360	0,91262	0,11590	2,6043	3,0678	1,00	5,00
	Total	1464	2,7881	0,91687	0,02396	2,7411	2,8351	1,00	5,00
JS	0 to 2 yrs	306	3,6035	0,93330	0,05335	3,4985	3,7085	1,00	5,00
	3 to 5 yrs	130	3,3179	1,01314	0,08886	3,1421	3,4938	1,00	5,00
	6 to 10 yrs	409	3,3993	0,99440	0,04917	3,3027	3,4960	1,00	5,00
	11 to 20 yrs	353	3,4995	0,90353	0,04809	3,4049	3,5941	1,00	5,00
	21 to 30 yrs	204	3,7010	0,74456	0,05213	3,5982	3,8038	1,00	5,00
	31+ yrs	62	3,8011	0,76931	0,09770	3,6057	3,9964	1,00	5,00
	Total	1464	3,5180	0,92900	0,02428	3,4704	3,5656	1,00	5,00

Post Hoc Tests – Years of Work Multiple Comparisons								
Dependent Variable				Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
LS	Bonferroni	0 to 2 yrs	3 to 5 yrs	.45767*	0,11235	0,001	0,1273	0,7880

Test of Homogeneity of Variances				
	Levene Statistic	**df1**	**df2**	**Sig.**
LS	3,858	5	1458	0,002
KM_O	0,408	5	1458	0,844
EC	1,245	5	1458	0,285
KM_T	4,142	5	1458	0,001
SF	1,035	5	1458	0,395
CR	0,754	5	1458	0,583
WE	0,480	5	1458	0,791
EB	4,737	5	1458	0,000
JS	7,118	5	1458	0,000

			6 to 10 yrs	.35487*	0,08112	0,000	0,1164	0,5934
			11 to 20 yrs	.36500*	0,08382	0,000	0,1186	0,6114
			21 to 30 yrs	0,19058	0,09700	0,745	-0,0946	0,4758
			31+ yrs	0,02870	0,14946	1,000	-0,4107	0,4681
		3 to 5 yrs	0 to 2 yrs	-.45767*	0,11235	0,001	-0,7880	-0,1273
			6 to 10 yrs	-0,10280	0,10805	1,000	-0,4205	0,2149
			11 to 20 yrs	-0,09267	0,11010	1,000	-0,4164	0,2310
			21 to 30 yrs	-0,26708	0,12044	0,401	-0,6212	0,0870
			31+ yrs	-0,42896	0,16564	0,145	-0,9159	0,0580
		6 to 10 yrs	0 to 2 yrs	-.35487*	0,08112	0,000	-0,5934	-0,1164
			3 to 5 yrs	0,10280	0,10805	1,000	-0,2149	0,4205
			11 to 20 yrs	0,01013	0,07797	1,000	-0,2191	0,2394
			21 to 30 yrs	-0,16429	0,09199	1,000	-0,4347	0,1062
			31+ yrs	-0,32617	0,14626	0,388	-0,7562	0,1038
		11 to 20 yrs	0 to 2 yrs	-.36500*	0,08382	0,000	-0,6114	-0,1186
			3 to 5 yrs	0,09267	0,11010	1,000	-0,2310	0,4164
			6 to 10 yrs	-0,01013	0,07797	1,000	-0,2394	0,2191
			21 to 30 yrs	-0,17442	0,09438	0,972	-0,4519	0,1031
			31+ yrs	-0,33630	0,14778	0,345	-0,7708	0,0982
		21 to 30 yrs	0 to 2 yrs	-0,19058	0,09700	0,745	-0,4758	0,0946
			3 to 5 yrs	0,26708	0,12044	0,401	-0,0870	0,6212
			6 to 10 yrs	0,16429	0,09199	1,000	-0,1062	0,4347
			11 to 20 yrs	0,17442	0,09438	0,972	-0,1031	0,4519
			31+ yrs	-0,16188	0,15563	1,000	-0,6194	0,2957
		31+ yrs	0 to 2 yrs	-0,02870	0,14946	1,000	-0,4681	0,4107
			3 to 5 yrs	0,42896	0,16564	0,145	-0,0580	0,9159
			6 to 10 yrs	0,32617	0,14626	0,388	-0,1038	0,7562
			11 to 20 yrs	0,33630	0,14778	0,345	-0,0982	0,7708
			21 to 30 yrs	0,16188	0,15563	1,000	-0,2957	0,6194

	Games-Howell	0 to 2 yrs	3 to 5 yrs	.45767*	0,12015	0,002	0,1122	0,8032
			6 to 10 yrs	.35487*	0,07968	0,000	0,1271	0,5826
			11 to 20 yrs	.36500*	0,08341	0,000	0,1266	0,6034
			21 to 30 yrs	0,19058	0,09159	0,299	-0,0716	0,4527
			31+ yrs	0,02870	0,13854	1,000	-0,3747	0,4321
		3 to 5 yrs	0 to 2 yrs	-.45767*	0,12015	0,002	-0,8032	-0,1122
			6 to 10 yrs	-0,10280	0,11748	0,952	-0,4408	0,2352
			11 to 20 yrs	-0,09267	0,12004	0,972	-0,4379	0,2525
			21 to 30 yrs	-0,26708	0,12586	0,279	-0,6287	0,0945
			31+ yrs	-0,42896	0,16324	0,097	-0,9005	0,0426
		6 to 10 yrs	0 to 2 yrs	-.35487*	0,07968	0,000	-0,5826	-0,1271
			3 to 5 yrs	0,10280	0,11748	0,952	-0,2352	0,4408
			11 to 20 yrs	0,01013	0,07952	1,000	-0,2171	0,2373
			21 to 30 yrs	-0,16429	0,08807	0,425	-0,4164	0,0878
			31+ yrs	-0,32617	0,13623	0,170	-0,7234	0,0711
		11 to 20 yrs	0 to 2 yrs	-.36500*	0,08341	0,000	-0,6034	-0,1266
			3 to 5 yrs	0,09267	0,12004	0,972	-0,2525	0,4379
			6 to 10 yrs	-0,01013	0,07952	1,000	-0,2373	0,2171
			21 to 30 yrs	-0,17442	0,09145	0,399	-0,4361	0,0873
			31+ yrs	-0,33630	0,13845	0,157	-0,7394	0,0669
		21 to 30 yrs	0 to 2 yrs	-0,19058	0,09159	0,299	-0,4527	0,0716
			3 to 5 yrs	0,26708	0,12586	0,279	-0,0945	0,6287
			6 to 10 yrs	0,16429	0,08807	0,425	-0,0878	0,4164
			11 to 20 yrs	0,17442	0,09145	0,399	-0,0873	0,4361
			31+ yrs	-0,16188	0,14352	0,869	-0,5788	0,2550
		31+ yrs	0 to 2 yrs	-0,02870	0,13854	1,000	-0,4321	0,3747
			3 to 5 yrs	0,42896	0,16324	0,097	-0,0426	0,9005
			6 to 10 yrs	0,32617	0,13623	0,170	-0,0711	0,7234
			11 to 20 yrs	0,33630	0,13845	0,157	-0,0669	0,7394

			21 to 30 yrs	0,16188	0,14352	0,869	-0,2550	0,5788
KM_O	Bonferroni	0 to 2 yrs	3 to 5 yrs	.33353*	0,08114	0,001	0,0950	0,5721
			6 to 10 yrs	.31156*	0,05858	0,000	0,1393	0,4838
			11 to 20 yrs	.28369*	0,06054	0,000	0,1057	0,4617
			21 to 30 yrs	0,11438	0,07006	1,000	-0,0916	0,3203
			31+ yrs	0,10401	0,10795	1,000	-0,2134	0,4214
		3 to 5 yrs	0 to 2 yrs	-.33353*	0,08114	0,001	-0,5721	-0,0950
			6 to 10 yrs	-0,02198	0,07804	1,000	-0,2514	0,2075
			11 to 20 yrs	-0,04985	0,07952	1,000	-0,2836	0,1839
			21 to 30 yrs	-0,21916	0,08698	0,178	-0,4749	0,0366
			31+ yrs	-0,22953	0,11962	0,828	-0,5812	0,1222
		6 to 10 yrs	0 to 2 yrs	-.31156*	0,05858	0,000	-0,4838	-0,1393
			3 to 5 yrs	0,02198	0,07804	1,000	-0,2075	0,2514
			11 to 20 yrs	-0,02787	0,05631	1,000	-0,1934	0,1377
			21 to 30 yrs	-.19718*	0,06643	0,046	-0,3925	-0,0019
			31+ yrs	-0,20755	0,10563	0,744	-0,5181	0,1030
		11 to 20 yrs	0 to 2 yrs	-.28369*	0,06054	0,000	-0,4617	-0,1057
			3 to 5 yrs	0,04985	0,07952	1,000	-0,1839	0,2836
			6 to 10 yrs	0,02787	0,05631	1,000	-0,1377	0,1934
			21 to 30 yrs	-0,16931	0,06817	0,197	-0,3697	0,0311
			31+ yrs	-0,17968	0,10673	1,000	-0,4935	0,1341
		21 to 30 yrs	0 to 2 yrs	-0,11438	0,07006	1,000	-0,3203	0,0916
			3 to 5 yrs	0,21916	0,08698	0,178	-0,0366	0,4749
			6 to 10 yrs	.19718*	0,06643	0,046	0,0019	0,3925
			11 to 20 yrs	0,16931	0,06817	0,197	-0,0311	0,3697
			31+ yrs	-0,01037	0,11240	1,000	-0,3408	0,3201
		31+ yrs	0 to 2 yrs	-0,10401	0,10795	1,000	-0,4214	0,2134
			3 to 5 yrs	0,22953	0,11962	0,828	-0,1222	0,5812
			6 to 10 yrs	0,20755	0,10563	0,744	-0,1030	0,5181

			11 to 20 yrs	0,17968	0,10673	1,000	-0,1341	0,4935
			21 to 30 yrs	0,01037	0,11240	1,000	-0,3201	0,3408
	Games-Howell	0 to 2 yrs	3 to 5 yrs	.33353*	0,08068	0,001	0,1018	0,5653
			6 to 10 yrs	.31156*	0,05929	0,000	0,1421	0,4810
			11 to 20 yrs	.28369*	0,06097	0,000	0,1094	0,4580
			21 to 30 yrs	0,11438	0,06742	0,535	-0,0786	0,3073
			31+ yrs	0,10401	0,11121	0,936	-0,2202	0,4282
		3 to 5 yrs	0 to 2 yrs	-.33353*	0,08068	0,001	-0,5653	-0,1018
			6 to 10 yrs	-0,02198	0,07775	1,000	-0,2455	0,2015
			11 to 20 yrs	-0,04985	0,07904	0,989	-0,2770	0,1773
			21 to 30 yrs	-0,21916	0,08411	0,100	-0,4606	0,0223
			31+ yrs	-0,22953	0,12206	0,419	-0,5833	0,1242
		6 to 10 yrs	0 to 2 yrs	-.31156*	0,05929	0,000	-0,4810	-0,1421
			3 to 5 yrs	0,02198	0,07775	1,000	-0,2015	0,2455
			11 to 20 yrs	-0,02787	0,05704	0,997	-0,1908	0,1351
			21 to 30 yrs	-.19718*	0,06388	0,026	-0,3800	-0,0143
			31+ yrs	-0,20755	0,10911	0,408	-0,5261	0,1110
		11 to 20 yrs	0 to 2 yrs	-.28369*	0,06097	0,000	-0,4580	-0,1094
			3 to 5 yrs	0,04985	0,07904	0,989	-0,1773	0,2770
			6 to 10 yrs	0,02787	0,05704	0,997	-0,1351	0,1908
			21 to 30 yrs	-0,16931	0,06545	0,103	-0,3566	0,0180
			31+ yrs	-0,17968	0,11003	0,579	-0,5007	0,1414
		21 to 30 yrs	0 to 2 yrs	-0,11438	0,06742	0,535	-0,3073	0,0786
			3 to 5 yrs	0,21916	0,08411	0,100	-0,0223	0,4606
			6 to 10 yrs	.19718*	0,06388	0,026	0,0143	0,3800
			11 to 20 yrs	0,16931	0,06545	0,103	-0,0180	0,3566
			31+ yrs	-0,01037	0,11373	1,000	-0,3413	0,3206
		31+ yrs	0 to 2 yrs	-0,10401	0,11121	0,936	-0,4282	0,2202
			3 to 5 yrs	0,22953	0,12206	0,419	-0,1242	0,5833

			6 to 10 yrs	0,20755	0,10911	0,408	-0,1110	0,5261
			11 to 20 yrs	0,17968	0,11003	0,579	-0,1414	0,5007
			21 to 30 yrs	0,01037	0,11373	1,000	-0,3206	0,3413
EC	Bonferroni	0 to 2 yrs	3 to 5 yrs	0,24884	0,10583	0,283	-0,0623	0,5600
			6 to 10 yrs	.30420*	0,07641	0,001	0,0796	0,5288
			11 to 20 yrs	.26203*	0,07896	0,014	0,0299	0,4942
			21 to 30 yrs	.27669*	0,09137	0,038	0,0080	0,5453
			31+ yrs	0,25413	0,14079	1,000	-0,1598	0,6681
		3 to 5 yrs	0 to 2 yrs	-0,24884	0,10583	0,283	-0,5600	0,0623
			6 to 10 yrs	0,05536	0,10178	1,000	-0,2439	0,3546
			11 to 20 yrs	0,01320	0,10371	1,000	-0,2917	0,3181
			21 to 30 yrs	0,02785	0,11345	1,000	-0,3057	0,3614
			31+ yrs	0,00529	0,15602	1,000	-0,4534	0,4640
		6 to 10 yrs	0 to 2 yrs	-.30420*	0,07641	0,001	-0,5288	-0,0796
			3 to 5 yrs	-0,05536	0,10178	1,000	-0,3546	0,2439
			11 to 20 yrs	-0,04217	0,07344	1,000	-0,2581	0,1738
			21 to 30 yrs	-0,02751	0,08665	1,000	-0,2823	0,2272
			31+ yrs	-0,05007	0,13777	1,000	-0,4551	0,3550
		11 to 20 yrs	0 to 2 yrs	-.26203*	0,07896	0,014	-0,4942	-0,0299
			3 to 5 yrs	-0,01320	0,10371	1,000	-0,3181	0,2917
			6 to 10 yrs	0,04217	0,07344	1,000	-0,1738	0,2581
			21 to 30 yrs	0,01465	0,08891	1,000	-0,2467	0,2760
			31+ yrs	-0,00790	0,13920	1,000	-0,4172	0,4014
		21 to 30 yrs	0 to 2 yrs	-.27669*	0,09137	0,038	-0,5453	-0,0080
			3 to 5 yrs	-0,02785	0,11345	1,000	-0,3614	0,3057
			6 to 10 yrs	0,02751	0,08665	1,000	-0,2272	0,2823
			11 to 20 yrs	-0,01465	0,08891	1,000	-0,2760	0,2467
			31+ yrs	-0,02256	0,14660	1,000	-0,4536	0,4085
		31+ yrs	0 to 2 yrs	-0,25413	0,14079	1,000	-0,6681	0,1598

			3 to 5 yrs	-0,00529	0,15602	1,000	-0,4640	0,4534
			6 to 10 yrs	0,05007	0,13777	1,000	-0,3550	0,4551
			11 to 20 yrs	0,00790	0,13920	1,000	-0,4014	0,4172
			21 to 30 yrs	0,02256	0,14660	1,000	-0,4085	0,4536
	Games-Howell	0 to 2 yrs	3 to 5 yrs	0,24884	0,10779	0,194	-0,0606	0,5583
			6 to 10 yrs	.30420*	0,07915	0,002	0,0779	0,5305
			11 to 20 yrs	.26203*	0,08228	0,019	0,0268	0,4972
			21 to 30 yrs	.27669*	0,08976	0,026	0,0199	0,5335
			31+ yrs	0,25413	0,14220	0,479	-0,1598	0,6680
		3 to 5 yrs	0 to 2 yrs	-0,24884	0,10779	0,194	-0,5583	0,0606
			6 to 10 yrs	0,05536	0,10085	0,994	-0,2347	0,3454
			11 to 20 yrs	0,01320	0,10333	1,000	-0,2837	0,3101
			21 to 30 yrs	0,02785	0,10938	1,000	-0,2862	0,3419
			31+ yrs	0,00529	0,15533	1,000	-0,4446	0,4552
		6 to 10 yrs	0 to 2 yrs	-.30420*	0,07915	0,002	-0,5305	-0,0779
			3 to 5 yrs	-0,05536	0,10085	0,994	-0,3454	0,2347
			11 to 20 yrs	-0,04217	0,07296	0,992	-0,2506	0,1663
			21 to 30 yrs	-0,02751	0,08130	0,999	-0,2602	0,2052
			31+ yrs	-0,05007	0,13702	0,999	-0,4502	0,3500
		11 to 20 yrs	0 to 2 yrs	-.26203*	0,08228	0,019	-0,4972	-0,0268
			3 to 5 yrs	-0,01320	0,10333	1,000	-0,3101	0,2837
			6 to 10 yrs	0,04217	0,07296	0,992	-0,1663	0,2506
			21 to 30 yrs	0,01465	0,08435	1,000	-0,2267	0,2561
			31+ yrs	-0,00790	0,13885	1,000	-0,4128	0,3970
		21 to 30 yrs	0 to 2 yrs	-.27669*	0,08976	0,026	-0,5335	-0,0199
			3 to 5 yrs	-0,02785	0,10938	1,000	-0,3419	0,2862
			6 to 10 yrs	0,02751	0,08130	0,999	-0,2052	0,2602
			11 to 20 yrs	-0,01465	0,08435	1,000	-0,2561	0,2267
			31+ yrs	-0,02256	0,14341	1,000	-0,4397	0,3946

		31+ yrs	0 to 2 yrs	-0,25413	0,14220	0,479	-0,6680	0,1598
			3 to 5 yrs	-0,00529	0,15533	1,000	-0,4552	0,4446
			6 to 10 yrs	0,05007	0,13702	0,999	-0,3500	0,4502
			11 to 20 yrs	0,00790	0,13885	1,000	-0,3970	0,4128
			21 to 30 yrs	0,02256	0,14341	1,000	-0,3946	0,4397
KM_T	Bonferroni	0 to 2 yrs	3 to 5 yrs	0,24087	0,09093	0,122	-0,0265	0,5082
			6 to 10 yrs	0,17352	0,06565	0,125	-0,0195	0,3665
			11 to 20 yrs	0,11319	0,06784	1,000	-0,0863	0,3126
			21 to 30 yrs	-0,04766	0,07851	1,000	-0,2785	0,1832
			31+ yrs	-0,00272	0,12096	1,000	-0,3584	0,3529
		3 to 5 yrs	0 to 2 yrs	-0,24087	0,09093	0,122	-0,5082	0,0265
			6 to 10 yrs	-0,06735	0,08745	1,000	-0,3244	0,1898
			11 to 20 yrs	-0,12768	0,08911	1,000	-0,3897	0,1343
			21 to 30 yrs	-.28852*	0,09747	0,047	-0,5751	-0,0020
			31+ yrs	-0,24359	0,13405	1,000	-0,6377	0,1505
		6 to 10 yrs	0 to 2 yrs	-0,17352	0,06565	0,125	-0,3665	0,0195
			3 to 5 yrs	0,06735	0,08745	1,000	-0,1898	0,3244
			11 to 20 yrs	-0,06033	0,06310	1,000	-0,2458	0,1252
			21 to 30 yrs	-.22118*	0,07445	0,045	-0,4401	-0,0023
			31+ yrs	-0,17624	0,11837	1,000	-0,5243	0,1718
		11 to 20 yrs	0 to 2 yrs	-0,11319	0,06784	1,000	-0,3126	0,0863
			3 to 5 yrs	0,12768	0,08911	1,000	-0,1343	0,3897
			6 to 10 yrs	0,06033	0,06310	1,000	-0,1252	0,2458
			21 to 30 yrs	-0,16085	0,07639	0,531	-0,3854	0,0637
			31+ yrs	-0,11591	0,11960	1,000	-0,4675	0,2357
		21 to 30 yrs	0 to 2 yrs	0,04766	0,07851	1,000	-0,1832	0,2785
			3 to 5 yrs	.28852*	0,09747	0,047	0,0020	0,5751
			6 to 10 yrs	.22118*	0,07445	0,045	0,0023	0,4401
			11 to 20 yrs	0,16085	0,07639	0,531	-0,0637	0,3854

			31+ yrs	0,04493	0,12596	1,000	-0,3254	0,4153
		31+ yrs	0 to 2 yrs	0,00272	0,12096	1,000	-0,3529	0,3584
			3 to 5 yrs	0,24359	0,13405	1,000	-0,1505	0,6377
			6 to 10 yrs	0,17624	0,11837	1,000	-0,1718	0,5243
			11 to 20 yrs	0,11591	0,11960	1,000	-0,2357	0,4675
			21 to 30 yrs	-0,04493	0,12596	1,000	-0,4153	0,3254
	Games-Howell	0 to 2 yrs	3 to 5 yrs	0,24087	0,09444	0,114	-0,0306	0,5123
			6 to 10 yrs	0,17352	0,06647	0,096	-0,0164	0,3635
			11 to 20 yrs	0,11319	0,06703	0,540	-0,0784	0,3048
			21 to 30 yrs	-0,04766	0,07087	0,985	-0,2505	0,1551
			31+ yrs	-0,00272	0,11702	1,000	-0,3437	0,3382
		3 to 5 yrs	0 to 2 yrs	-0,24087	0,09444	0,114	-0,5123	0,0306
			6 to 10 yrs	-0,06735	0,09316	0,979	-0,3352	0,2005
			11 to 20 yrs	-0,12768	0,09356	0,748	-0,3967	0,1413
			21 to 30 yrs	-.28852*	0,09636	0,036	-0,5654	-0,0116
			31+ yrs	-0,24359	0,13400	0,458	-0,6312	0,1440
		6 to 10 yrs	0 to 2 yrs	-0,17352	0,06647	0,096	-0,3635	0,0164
			3 to 5 yrs	0,06735	0,09316	0,979	-0,2005	0,3352
			11 to 20 yrs	-0,06033	0,06521	0,940	-0,2467	0,1260
			21 to 30 yrs	-.22118*	0,06916	0,018	-0,4190	-0,0233
			31+ yrs	-0,17624	0,11600	0,653	-0,5145	0,1620
		11 to 20 yrs	0 to 2 yrs	-0,11319	0,06703	0,540	-0,3048	0,0784
			3 to 5 yrs	0,12768	0,09356	0,748	-0,1413	0,3967
			6 to 10 yrs	0,06033	0,06521	0,940	-0,1260	0,2467
			21 to 30 yrs	-0,16085	0,06970	0,193	-0,3603	0,0386
			31+ yrs	-0,11591	0,11632	0,918	-0,4550	0,2232
		21 to 30 yrs	0 to 2 yrs	0,04766	0,07087	0,985	-0,1551	0,2505
			3 to 5 yrs	.28852*	0,09636	0,036	0,0116	0,5654
			6 to 10 yrs	.22118*	0,06916	0,018	0,0233	0,4190

			11 to 20 yrs	0,16085	0,06970	0,193	-0,0386	0,3603
			31+ yrs	0,04493	0,11857	0,999	-0,3002	0,3901
		31+ yrs	0 to 2 yrs	0,00272	0,11702	1,000	-0,3382	0,3437
			3 to 5 yrs	0,24359	0,13400	0,458	-0,1440	0,6312
			6 to 10 yrs	0,17624	0,11600	0,653	-0,1620	0,5145
			11 to 20 yrs	0,11591	0,11632	0,918	-0,2232	0,4550
			21 to 30 yrs	-0,04493	0,11857	0,999	-0,3901	0,3002
SF	Bonferroni	0 to 2 yrs	3 to 5 yrs	.27738*	0,08521	0,017	0,0269	0,5279
			6 to 10 yrs	.39464*	0,06152	0,000	0,2138	0,5755
			11 to 20 yrs	.53056*	0,06357	0,000	0,3437	0,7175
			21 to 30 yrs	.49592*	0,07357	0,000	0,2796	0,7122
			31+ yrs	.47138*	0,11336	0,001	0,1381	0,8047
		3 to 5 yrs	0 to 2 yrs	-.27738*	0,08521	0,017	-0,5279	-0,0269
			6 to 10 yrs	0,11726	0,08195	1,000	-0,1237	0,3582
			11 to 20 yrs	.25319*	0,08350	0,037	0,0077	0,4987
			21 to 30 yrs	0,21854	0,09134	0,253	-0,0500	0,4871
			31+ yrs	0,19400	0,12562	1,000	-0,1753	0,5633
		6 to 10 yrs	0 to 2 yrs	-.39464*	0,06152	0,000	-0,5755	-0,2138
			3 to 5 yrs	-0,11726	0,08195	1,000	-0,3582	0,1237
			11 to 20 yrs	0,13593	0,05913	0,325	-0,0379	0,3098
			21 to 30 yrs	0,10128	0,06976	1,000	-0,1038	0,3064
			31+ yrs	0,07674	0,11093	1,000	-0,2494	0,4029
		11 to 20 yrs	0 to 2 yrs	-.53056*	0,06357	0,000	-0,7175	-0,3437
			3 to 5 yrs	-.25319*	0,08350	0,037	-0,4987	-0,0077
			6 to 10 yrs	-0,13593	0,05913	0,325	-0,3098	0,0379
			21 to 30 yrs	-0,03465	0,07158	1,000	-0,2451	0,1758
			31+ yrs	-0,05919	0,11208	1,000	-0,3887	0,2703
		21 to 30 yrs	0 to 2 yrs	-.49592*	0,07357	0,000	-0,7122	-0,2796
			3 to 5 yrs	-0,21854	0,09134	0,253	-0,4871	0,0500

			6 to 10 yrs	-0,10128	0,06976	1,000	-0,3064	0,1038
			11 to 20 yrs	0,03465	0,07158	1,000	-0,1758	0,2451
			31+ yrs	-0,02454	0,11803	1,000	-0,3716	0,3225
		31+ yrs	0 to 2 yrs	-.47138*	0,11336	0,001	-0,8047	-0,1381
			3 to 5 yrs	-0,19400	0,12562	1,000	-0,5633	0,1753
			6 to 10 yrs	-0,07674	0,11093	1,000	-0,4029	0,2494
			11 to 20 yrs	0,05919	0,11208	1,000	-0,2703	0,3887
			21 to 30 yrs	0,02454	0,11803	1,000	-0,3225	0,3716
	Games-Howell	0 to 2 yrs	3 to 5 yrs	.27738*	0,08702	0,020	0,0273	0,5274
			6 to 10 yrs	.39464*	0,06024	0,000	0,2225	0,5668
			11 to 20 yrs	.53056*	0,06496	0,000	0,3449	0,7162
			21 to 30 yrs	.49592*	0,07235	0,000	0,2888	0,7030
			31+ yrs	.47138*	0,11534	0,001	0,1352	0,8076
		3 to 5 yrs	0 to 2 yrs	-.27738*	0,08702	0,020	-0,5274	-0,0273
			6 to 10 yrs	0,11726	0,08309	0,720	-0,1218	0,3563
			11 to 20 yrs	.25319*	0,08658	0,043	0,0044	0,5020
			21 to 30 yrs	0,21854	0,09225	0,171	-0,0463	0,4834
			31+ yrs	0,19400	0,12876	0,661	-0,1789	0,5669
		6 to 10 yrs	0 to 2 yrs	-.39464*	0,06024	0,000	-0,5668	-0,2225
			3 to 5 yrs	-0,11726	0,08309	0,720	-0,3563	0,1218
			11 to 20 yrs	0,13593	0,05959	0,203	-0,0344	0,3062
			21 to 30 yrs	0,10128	0,06757	0,665	-0,0922	0,2948
			31+ yrs	0,07674	0,11240	0,983	-0,2517	0,4052
		11 to 20 yrs	0 to 2 yrs	-.53056*	0,06496	0,000	-0,7162	-0,3449
			3 to 5 yrs	-.25319*	0,08658	0,043	-0,5020	-0,0044
			6 to 10 yrs	-0,13593	0,05959	0,203	-0,3062	0,0344
			21 to 30 yrs	-0,03465	0,07181	0,997	-0,2402	0,1709
			31+ yrs	-0,05919	0,11500	0,995	-0,3945	0,2761
		21 to 30 yrs	0 to 2 yrs	-.49592*	0,07235	0,000	-0,7030	-0,2888

			3 to 5 yrs	-0,21854	0,09225	0,171	-0,4834	0,0463
			6 to 10 yrs	-0,10128	0,06757	0,665	-0,2948	0,0922
			11 to 20 yrs	0,03465	0,07181	0,997	-0,1709	0,2402
			31+ yrs	-0,02454	0,11933	1,000	-0,3715	0,3224
		31+ yrs	0 to 2 yrs	-.47138*	0,11534	0,001	-0,8076	-0,1352
			3 to 5 yrs	-0,19400	0,12876	0,661	-0,5669	0,1789
			6 to 10 yrs	-0,07674	0,11240	0,983	-0,4052	0,2517
			11 to 20 yrs	0,05919	0,11500	0,995	-0,2761	0,3945
			21 to 30 yrs	0,02454	0,11933	1,000	-0,3224	0,3715
CR	Bonferroni	0 to 2 yrs	3 to 5 yrs	0,25577	0,09451	0,103	-0,0221	0,5336
			6 to 10 yrs	.33979*	0,06824	0,000	0,1392	0,5404
			11 to 20 yrs	.37906*	0,07051	0,000	0,1717	0,5864
			21 to 30 yrs	.31928*	0,08160	0,001	0,0794	0,5592
			31+ yrs	0,12912	0,12573	1,000	-0,2405	0,4988
		3 to 5 yrs	0 to 2 yrs	-0,25577	0,09451	0,103	-0,5336	0,0221
			6 to 10 yrs	0,08402	0,09090	1,000	-0,1832	0,3513
			11 to 20 yrs	0,12329	0,09262	1,000	-0,1490	0,3956
			21 to 30 yrs	0,06351	0,10131	1,000	-0,2344	0,3614
			31+ yrs	-0,12665	0,13934	1,000	-0,5363	0,2830
		6 to 10 yrs	0 to 2 yrs	-.33979*	0,06824	0,000	-0,5404	-0,1392
			3 to 5 yrs	-0,08402	0,09090	1,000	-0,3513	0,1832
			11 to 20 yrs	0,03927	0,06559	1,000	-0,1536	0,2321
			21 to 30 yrs	-0,02051	0,07738	1,000	-0,2480	0,2070
			31+ yrs	-0,21067	0,12304	1,000	-0,5724	0,1511
		11 to 20 yrs	0 to 2 yrs	-.37906*	0,07051	0,000	-0,5864	-0,1717
			3 to 5 yrs	-0,12329	0,09262	1,000	-0,3956	0,1490
			6 to 10 yrs	-0,03927	0,06559	1,000	-0,2321	0,1536
			21 to 30 yrs	-0,05978	0,07940	1,000	-0,2932	0,1737
			31+ yrs	-0,24994	0,12432	0,668	-0,6154	0,1156

		21 to 30 yrs	0 to 2 yrs	-.31928*	0,08160	0,001	-0,5592	-0,0794
			3 to 5 yrs	-0,06351	0,10131	1,000	-0,3614	0,2344
			6 to 10 yrs	0,02051	0,07738	1,000	-0,2070	0,2480
			11 to 20 yrs	0,05978	0,07940	1,000	-0,1737	0,2932
			31+ yrs	-0,19016	0,13092	1,000	-0,5751	0,1948
		31+ yrs	0 to 2 yrs	-0,12912	0,12573	1,000	-0,4988	0,2405
			3 to 5 yrs	0,12665	0,13934	1,000	-0,2830	0,5363
			6 to 10 yrs	0,21067	0,12304	1,000	-0,1511	0,5724
			11 to 20 yrs	0,24994	0,12432	0,668	-0,1156	0,6154
			21 to 30 yrs	0,19016	0,13092	1,000	-0,1948	0,5751
	Games-Howell	0 to 2 yrs	3 to 5 yrs	0,25577	0,09466	0,078	-0,0161	0,5276
			6 to 10 yrs	.33979*	0,06831	0,000	0,1445	0,5350
			11 to 20 yrs	.37906*	0,07101	0,000	0,1761	0,5820
			21 to 30 yrs	.31928*	0,08161	0,001	0,0857	0,5529
			31+ yrs	0,12912	0,14023	0,940	-0,2801	0,5383
		3 to 5 yrs	0 to 2 yrs	-0,25577	0,09466	0,078	-0,5276	0,0161
			6 to 10 yrs	0,08402	0,09001	0,937	-0,1748	0,3429
			11 to 20 yrs	0,12329	0,09208	0,763	-0,1413	0,3879
			21 to 30 yrs	0,06351	0,10048	0,989	-0,2249	0,3519
			31+ yrs	-0,12665	0,15199	0,961	-0,5677	0,3144
		6 to 10 yrs	0 to 2 yrs	-.33979*	0,06831	0,000	-0,5350	-0,1445
			3 to 5 yrs	-0,08402	0,09001	0,937	-0,3429	0,1748
			11 to 20 yrs	0,03927	0,06469	0,991	-0,1456	0,2241
			21 to 30 yrs	-0,02051	0,07618	1,000	-0,2386	0,1976
			31+ yrs	-0,21067	0,13714	0,642	-0,6117	0,1904
		11 to 20 yrs	0 to 2 yrs	-.37906*	0,07101	0,000	-0,5820	-0,1761
			3 to 5 yrs	-0,12329	0,09208	0,763	-0,3879	0,1413
			6 to 10 yrs	-0,03927	0,06469	0,991	-0,2241	0,1456
			21 to 30 yrs	-0,05978	0,07861	0,974	-0,2848	0,1653

			31+ yrs	-0,24994	0,13851	0,469	-0,6546	0,1547
		21 to 30 yrs	0 to 2 yrs	-.31928*	0,08161	0,001	-0,5529	-0,0857
			3 to 5 yrs	-0,06351	0,10048	0,989	-0,3519	0,2249
			6 to 10 yrs	0,02051	0,07618	1,000	-0,1976	0,2386
			11 to 20 yrs	0,05978	0,07861	0,974	-0,1653	0,2848
			31+ yrs	-0,19016	0,14423	0,774	-0,6101	0,2297
		31+ yrs	0 to 2 yrs	-0,12912	0,14023	0,940	-0,5383	0,2801
			3 to 5 yrs	0,12665	0,15199	0,961	-0,3144	0,5677
			6 to 10 yrs	0,21067	0,13714	0,642	-0,1904	0,6117
			11 to 20 yrs	0,24994	0,13851	0,469	-0,1547	0,6546
			21 to 30 yrs	0,19016	0,14423	0,774	-0,2297	0,6101
WE	Bonferroni	0 to 2 yrs	3 to 5 yrs	0,28086	0,10940	0,155	-0,0408	0,6025
			6 to 10 yrs	0,17233	0,07899	0,439	-0,0599	0,4046
			11 to 20 yrs	0,20275	0,08162	0,197	-0,0372	0,4427
			21 to 30 yrs	0,23911	0,09446	0,172	-0,0386	0,5168
			31+ yrs	-0,02460	0,14554	1,000	-0,4525	0,4033
		3 to 5 yrs	0 to 2 yrs	-0,28086	0,10940	0,155	-0,6025	0,0408
			6 to 10 yrs	-0,10853	0,10522	1,000	-0,4179	0,2008
			11 to 20 yrs	-0,07811	0,10721	1,000	-0,3933	0,2371
			21 to 30 yrs	-0,04175	0,11727	1,000	-0,3865	0,3030
			31+ yrs	-0,30546	0,16129	0,877	-0,7797	0,1687
		6 to 10 yrs	0 to 2 yrs	-0,17233	0,07899	0,439	-0,4046	0,0599
			3 to 5 yrs	0,10853	0,10522	1,000	-0,2008	0,4179
			11 to 20 yrs	0,03042	0,07592	1,000	-0,1928	0,2536
			21 to 30 yrs	0,06678	0,08957	1,000	-0,1966	0,3301
			31+ yrs	-0,19693	0,14242	1,000	-0,6156	0,2218
		11 to 20 yrs	0 to 2 yrs	-0,20275	0,08162	0,197	-0,4427	0,0372
			3 to 5 yrs	0,07811	0,10721	1,000	-0,2371	0,3933
			6 to 10 yrs	-0,03042	0,07592	1,000	-0,2536	0,1928

			21 to 30 yrs	0,03636	0,09191	1,000	-0,2338	0,3066
			31+ yrs	-0,22734	0,14390	1,000	-0,6504	0,1957
		21 to 30 yrs	0 to 2 yrs	-0,23911	0,09446	0,172	-0,5168	0,0386
			3 to 5 yrs	0,04175	0,11727	1,000	-0,3030	0,3865
			6 to 10 yrs	-0,06678	0,08957	1,000	-0,3301	0,1966
			11 to 20 yrs	-0,03636	0,09191	1,000	-0,3066	0,2338
			31+ yrs	-0,26370	0,15155	1,000	-0,7093	0,1819
		31+ yrs	0 to 2 yrs	0,02460	0,14554	1,000	-0,4033	0,4525
			3 to 5 yrs	0,30546	0,16129	0,877	-0,1687	0,7797
			6 to 10 yrs	0,19693	0,14242	1,000	-0,2218	0,6156
			11 to 20 yrs	0,22734	0,14390	1,000	-0,1957	0,6504
			21 to 30 yrs	0,26370	0,15155	1,000	-0,1819	0,7093
	Games-Howell	0 to 2 yrs	3 to 5 yrs	0,28086	0,10971	0,111	-0,0342	0,5959
			6 to 10 yrs	0,17233	0,08044	0,267	-0,0576	0,4022
			11 to 20 yrs	0,20275	0,08287	0,142	-0,0341	0,4396
			21 to 30 yrs	0,23911	0,09329	0,109	-0,0279	0,5061
			31+ yrs	-0,02460	0,15463	1,000	-0,4754	0,4262
		3 to 5 yrs	0 to 2 yrs	-0,28086	0,10971	0,111	-0,5959	0,0342
			6 to 10 yrs	-0,10853	0,10420	0,903	-0,4081	0,1911
			11 to 20 yrs	-0,07811	0,10609	0,977	-0,3830	0,2268
			21 to 30 yrs	-0,04175	0,11441	0,999	-0,3702	0,2867
			31+ yrs	-0,30546	0,16822	0,460	-0,7932	0,1823
		6 to 10 yrs	0 to 2 yrs	-0,17233	0,08044	0,267	-0,4022	0,0576
			3 to 5 yrs	0,10853	0,10420	0,903	-0,1911	0,4081
			11 to 20 yrs	0,03042	0,07542	0,999	-0,1851	0,2459
			21 to 30 yrs	0,06678	0,08674	0,972	-0,1816	0,3151
			31+ yrs	-0,19693	0,15077	0,781	-0,6375	0,2436
		11 to 20 yrs	0 to 2 yrs	-0,20275	0,08287	0,142	-0,4396	0,0341
			3 to 5 yrs	0,07811	0,10609	0,977	-0,2268	0,3830

			6 to 10 yrs	-0,03042	0,07542	0,999	-0,2459	0,1851
			21 to 30 yrs	0,03636	0,08900	0,999	-0,2184	0,2911
			31+ yrs	-0,22734	0,15208	0,668	-0,6713	0,2166
		21 to 30 yrs	0 to 2 yrs	-0,23911	0,09329	0,109	-0,5061	0,0279
			3 to 5 yrs	0,04175	0,11441	0,999	-0,2867	0,3702
			6 to 10 yrs	-0,06678	0,08674	0,972	-0,3151	0,1816
			11 to 20 yrs	-0,03636	0,08900	0,999	-0,2911	0,2184
			31+ yrs	-0,26370	0,15800	0,556	-0,7235	0,1961
		31+ yrs	0 to 2 yrs	0,02460	0,15463	1,000	-0,4262	0,4754
			3 to 5 yrs	0,30546	0,16822	0,460	-0,1823	0,7932
			6 to 10 yrs	0,19693	0,15077	0,781	-0,2436	0,6375
			11 to 20 yrs	0,22734	0,15208	0,668	-0,2166	0,6713
			21 to 30 yrs	0,26370	0,15800	0,556	-0,1961	0,7235
EB	Bonferroni	0 to 2 yrs	3 to 5 yrs	0,19703	0,09495	0,572	-0,0821	0,4762
			6 to 10 yrs	.30940*	0,06855	0,000	0,1079	0,5110
			11 to 20 yrs	.38853*	0,07084	0,000	0,1802	0,5968
			21 to 30 yrs	.36683*	0,08198	0,000	0,1258	0,6079
			31+ yrs	0,20973	0,12632	1,000	-0,1616	0,5811
		3 to 5 yrs	0 to 2 yrs	-0,19703	0,09495	0,572	-0,4762	0,0821
			6 to 10 yrs	0,11237	0,09132	1,000	-0,1561	0,3808
			11 to 20 yrs	0,19149	0,09305	0,597	-0,0821	0,4651
			21 to 30 yrs	0,16980	0,10178	1,000	-0,1295	0,4690
			31+ yrs	0,01270	0,13998	1,000	-0,3989	0,4243
		6 to 10 yrs	0 to 2 yrs	-.30940*	0,06855	0,000	-0,5110	-0,1079
			3 to 5 yrs	-0,11237	0,09132	1,000	-0,3808	0,1561
			11 to 20 yrs	0,07913	0,06589	1,000	-0,1146	0,2728
			21 to 30 yrs	0,05743	0,07774	1,000	-0,1711	0,2860
			31+ yrs	-0,09967	0,12361	1,000	-0,4631	0,2637
		11 to 20 yrs	0 to 2 yrs	-.38853*	0,07084	0,000	-0,5968	-0,1802

			3 to 5 yrs	-0,19149	0,09305	0,597	-0,4651	0,0821
			6 to 10 yrs	-0,07913	0,06589	1,000	-0,2728	0,1146
			21 to 30 yrs	-0,02170	0,07977	1,000	-0,2562	0,2128
			31+ yrs	-0,17880	0,12489	1,000	-0,5460	0,1884
		21 to 30 yrs	0 to 2 yrs	-.36683*	0,08198	0,000	-0,6079	-0,1258
			3 to 5 yrs	-0,16980	0,10178	1,000	-0,4690	0,1295
			6 to 10 yrs	-0,05743	0,07774	1,000	-0,2860	0,1711
			11 to 20 yrs	0,02170	0,07977	1,000	-0,2128	0,2562
			31+ yrs	-0,15710	0,13153	1,000	-0,5438	0,2296
		31+ yrs	0 to 2 yrs	-0,20973	0,12632	1,000	-0,5811	0,1616
			3 to 5 yrs	-0,01270	0,13998	1,000	-0,4243	0,3989
			6 to 10 yrs	0,09967	0,12361	1,000	-0,2637	0,4631
			11 to 20 yrs	0,17880	0,12489	1,000	-0,1884	0,5460
			21 to 30 yrs	0,15710	0,13153	1,000	-0,2296	0,5438
	Games-Howell	0 to 2 yrs	3 to 5 yrs	0,19703	0,09551	0,310	-0,0770	0,4711
			6 to 10 yrs	.30940*	0,07379	0,000	0,0985	0,5204
			11 to 20 yrs	.38853*	0,07448	0,000	0,1756	0,6015
			21 to 30 yrs	.36683*	0,08259	0,000	0,1305	0,6031
			31+ yrs	0,20973	0,12996	0,592	-0,1683	0,5877
		3 to 5 yrs	0 to 2 yrs	-0,19703	0,09551	0,310	-0,4711	0,0770
			6 to 10 yrs	0,11237	0,08749	0,793	-0,1391	0,3638
			11 to 20 yrs	0,19149	0,08808	0,254	-0,0616	0,4446
			21 to 30 yrs	0,16980	0,09503	0,476	-0,1030	0,4426
			31+ yrs	0,01270	0,13820	1,000	-0,3879	0,4133
		6 to 10 yrs	0 to 2 yrs	-.30940*	0,07379	0,000	-0,5204	-0,0985
			3 to 5 yrs	-0,11237	0,08749	0,793	-0,3638	0,1391
			11 to 20 yrs	0,07913	0,06387	0,818	-0,1034	0,2616
			21 to 30 yrs	0,05743	0,07316	0,970	-0,1520	0,2669
			31+ yrs	-0,09967	0,12418	0,966	-0,4623	0,2629

		11 to 20 yrs	0 to 2 yrs	-.38853*	0,07448	0,000	-0,6015	-0,1756
			3 to 5 yrs	-0,19149	0,08808	0,254	-0,4446	0,0616
			6 to 10 yrs	-0,07913	0,06387	0,818	-0,2616	0,1034
			21 to 30 yrs	-0,02170	0,07386	1,000	-0,2331	0,1897
			31+ yrs	-0,17880	0,12460	0,706	-0,5425	0,1849
		21 to 30 yrs	0 to 2 yrs	-.36683*	0,08259	0,000	-0,6031	-0,1305
			3 to 5 yrs	-0,16980	0,09503	0,476	-0,4426	0,1030
			6 to 10 yrs	-0,05743	0,07316	0,970	-0,2669	0,1520
			11 to 20 yrs	0,02170	0,07386	1,000	-0,1897	0,2331
			31+ yrs	-0,15710	0,12961	0,830	-0,5342	0,2200
		31+ yrs	0 to 2 yrs	-0,20973	0,12996	0,592	-0,5877	0,1683
			3 to 5 yrs	-0,01270	0,13820	1,000	-0,4133	0,3879
			6 to 10 yrs	0,09967	0,12418	0,966	-0,2629	0,4623
			11 to 20 yrs	0,17880	0,12460	0,706	-0,1849	0,5425
			21 to 30 yrs	0,15710	0,12961	0,830	-0,2200	0,5342
JS	Bonferroni	0 to 2 yrs	3 to 5 yrs	.28554*	0,09645	0,047	0,0020	0,5691
			6 to 10 yrs	0,20414	0,06964	0,051	-0,0006	0,4089
			11 to 20 yrs	0,10396	0,07196	1,000	-0,1076	0,3155
			21 to 30 yrs	-0,09749	0,08327	1,000	-0,3423	0,1473
			31+ yrs	-0,19759	0,12831	1,000	-0,5748	0,1797
		3 to 5 yrs	0 to 2 yrs	-.28554*	0,09645	0,047	-0,5691	-0,0020
			6 to 10 yrs	-0,08140	0,09276	1,000	-0,3541	0,1913
			11 to 20 yrs	-0,18158	0,09452	0,824	-0,4595	0,0963
			21 to 30 yrs	-.38303*	0,10339	0,003	-0,6870	-0,0791
			31+ yrs	-.48313*	0,14219	0,010	-0,9012	-0,0651
		6 to 10 yrs	0 to 2 yrs	-0,20414	0,06964	0,051	-0,4089	0,0006
			3 to 5 yrs	0,08140	0,09276	1,000	-0,1913	0,3541
			11 to 20 yrs	-0,10018	0,06693	1,000	-0,2970	0,0966
			21 to 30 yrs	-.30163*	0,07897	0,002	-0,5338	-0,0695

			31+ yrs	-.40173*	0,12556	0,021	-0,7709	-0,0326
		11 to 20 yrs	0 to 2 yrs	-0,10396	0,07196	1,000	-0,3155	0,1076
			3 to 5 yrs	0,18158	0,09452	0,824	-0,0963	0,4595
			6 to 10 yrs	0,10018	0,06693	1,000	-0,0966	0,2970
			21 to 30 yrs	-0,20145	0,08103	0,195	-0,4397	0,0368
			31+ yrs	-0,30155	0,12686	0,264	-0,6745	0,0714
		21 to 30 yrs	0 to 2 yrs	0,09749	0,08327	1,000	-0,1473	0,3423
			3 to 5 yrs	.38303*	0,10339	0,003	0,0791	0,6870
			6 to 10 yrs	.30163*	0,07897	0,002	0,0695	0,5338
			11 to 20 yrs	0,20145	0,08103	0,195	-0,0368	0,4397
			31+ yrs	-0,10009	0,13361	1,000	-0,4929	0,2927
		31+ yrs	0 to 2 yrs	0,19759	0,12831	1,000	-0,1797	0,5748
			3 to 5 yrs	.48313*	0,14219	0,010	0,0651	0,9012
			6 to 10 yrs	.40173*	0,12556	0,021	0,0326	0,7709
			11 to 20 yrs	0,30155	0,12686	0,264	-0,0714	0,6745
			21 to 30 yrs	0,10009	0,13361	1,000	-0,2927	0,4929
	Games-Howell	0 to 2 yrs	3 to 5 yrs	0,28554	0,10365	0,069	-0,0124	0,5834
			6 to 10 yrs	0,20414	0,07255	0,057	-0,0032	0,4115
			11 to 20 yrs	0,10396	0,07183	0,698	-0,1014	0,3093
			21 to 30 yrs	-0,09749	0,07459	0,781	-0,3109	0,1159
			31+ yrs	-0,19759	0,11132	0,486	-0,5210	0,1258
		3 to 5 yrs	0 to 2 yrs	-0,28554	0,10365	0,069	-0,5834	0,0124
			6 to 10 yrs	-0,08140	0,10156	0,967	-0,3734	0,2106
			11 to 20 yrs	-0,18158	0,10104	0,470	-0,4722	0,1090
			21 to 30 yrs	-.38303*	0,10302	0,003	-0,6793	-0,0868
			31+ yrs	-.48313*	0,13207	0,005	-0,8643	-0,1020
		6 to 10 yrs	0 to 2 yrs	-0,20414	0,07255	0,057	-0,4115	0,0032
			3 to 5 yrs	0,08140	0,10156	0,967	-0,2106	0,3734
			11 to 20 yrs	-0,10018	0,06878	0,692	-0,2967	0,0963

			21 to 30 yrs	-.30163*	0,07166	0,000	-0,5066	-0,0967
			31+ yrs	-.40173*	0,10938	0,005	-0,7199	-0,0836
		11 to 20 yrs	0 to 2 yrs	-0,10396	0,07183	0,698	-0,3093	0,1014
			3 to 5 yrs	0,18158	0,10104	0,470	-0,1090	0,4722
			6 to 10 yrs	0,10018	0,06878	0,692	-0,0963	0,2967
			21 to 30 yrs	-0,20145	0,07092	0,053	-0,4044	0,0015
			31+ yrs	-0,30155	0,10890	0,072	-0,6184	0,0153
		21 to 30 yrs	0 to 2 yrs	0,09749	0,07459	0,781	-0,1159	0,3109
			3 to 5 yrs	.38303*	0,10302	0,003	0,0868	0,6793
			6 to 10 yrs	.30163*	0,07166	0,000	0,0967	0,5066
			11 to 20 yrs	0,20145	0,07092	0,053	-0,0015	0,4044
			31+ yrs	-0,10009	0,11074	0,945	-0,4220	0,2218
		31+ yrs	0 to 2 yrs	0,19759	0,11132	0,486	-0,1258	0,5210
			3 to 5 yrs	.48313*	0,13207	0,005	0,1020	0,8643
			6 to 10 yrs	.40173*	0,10938	0,005	0,0836	0,7199
			11 to 20 yrs	0,30155	0,10890	0,072	-0,0153	0,6184
			21 to 30 yrs	0,10009	0,11074	0,945	-0,2218	0,4220

***. The mean difference is significant at the 0.05 level.**

One sample

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
LS	1978 and 2000	556	3,3677	1,13103	0,04797	3,2735	3,4619	1,00	5,00
	1965 and 1977	596	3,3879	1,06892	0,04378	3,3019	3,4739	1,00	5,00

	1946 and 1964	311	3,4756	1,02916	0,05836	3,3608	3,5904	1,00	5,00
	Total	1463	3,3989	1,08484	0,02836	3,3432	3,4545	1,00	5,00
KM_O	1978 and 2000	556	2,9613	0,80907	0,03431	2,8939	3,0287	1,00	5,00
	1965 and 1977	596	2,8831	0,79821	0,03270	2,8188	2,9473	1,00	5,00
	1946 and 1964	311	3,0740	0,69449	0,03938	2,9965	3,1514	1,00	4,90
	Total	1463	2,9534	0,78435	0,02051	2,9132	2,9936	1,00	5,00
EC	1978 and 2000	556	3,3267	1,07411	0,04555	3,2373	3,4162	1,00	5,00
	1965 and 1977	596	3,2500	0,99932	0,04093	3,1696	3,3304	1,00	5,00
	1946 and 1964	311	3,3773	0,93892	0,05324	3,2725	3,4820	1,00	5,00
	Total	1463	3,3062	1,01678	0,02658	3,2541	3,3584	1,00	5,00
KM_T	1978 and 2000	556	3,6352	0,92353	0,03917	3,5583	3,7121	1,00	5,00
	1965 and 1977	596	3,6256	0,88098	0,03609	3,5547	3,6964	1,00	5,00
	1946 and 1964	311	3,7481	0,76433	0,04334	3,6628	3,8334	1,17	5,00
	Total	1463	3,6553	0,87514	0,02288	3,6104	3,7002	1,00	5,00
SF	1978 and 2000	556	3,3333	0,82461	0,03497	3,2646	3,4020	1,00	5,00
	1965 and 1977	596	3,1449	0,87260	0,03574	3,0747	3,2151	1,00	5,00
	1946 and 1964	311	3,1645	0,76164	0,04319	3,0795	3,2495	1,00	5,00
	Total	1463	3,2207	0,83598	0,02186	3,1778	3,2635	1,00	5,00
CR	1978 and 2000	556	2,9227	0,91796	0,03893	2,8462	2,9991	1,00	5,00
	1965 and 1977	596	2,7718	0,93320	0,03823	2,6967	2,8469	1,00	5,00
	1946 and 1964	311	2,8579	0,85368	0,04841	2,7626	2,9531	1,00	5,00
	Total	1463	2,8474	0,91288	0,02387	2,8006	2,8943	1,00	5,00
WE	1978 and 2000	556	2,8022	1,05809	0,04487	2,7140	2,8903	1,00	5,00
	1965 and 1977	596	2,6639	1,07018	0,04384	2,5778	2,7500	1,00	5,00
	1946 and 1964	311	2,9271	0,96370	0,05465	2,8196	3,0346	1,00	5,00
	Total	1463	2,7724	1,04798	0,02740	2,7186	2,8261	1,00	5,00
EB	1978 and 2000	556	2,9415	0,97918	0,04153	2,8600	3,0231	1,00	5,00
	1965 and 1977	596	2,6890	0,87957	0,03603	2,6183	2,7598	1,00	5,00
	1946 and 1964	311	2,6972	0,83239	0,04720	2,6043	2,7901	1,00	5,00

	Total	1463	2,7867	0,91676	0,02397	2,7397	2,8338	1,00	5,00
JS	1978 and 2000	556	3,4125	1,03034	0,04370	3,3266	3,4983	1,00	5,00
	1965 and 1977	596	3,5196	0,89076	0,03649	3,4479	3,5912	1,00	5,00
	1946 and 1964	311	3,6935	0,78631	0,04459	3,6057	3,7812	1,00	5,00
	Total	1463	3,5158	0,93156	0,02435	3,4681	3,5636	1,00	5,00

Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
LS	4,270	2	1460	0,014
KM_O	6,269	2	1460	0,002
EC	3,773	2	1460	0,023
KM_T	6,168	2	1460	0,002
SF	3,410	2	1460	0,033
CR	2,543	2	1460	0,079
WE	2,612	2	1460	0,074
EB	8,938	2	1460	0,000
JS	19,627	2	1460	0,000

Post Hoc Tests - Generation

Multiple Comparisons

Dependent Variable				Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
LS	Bonferroni	1978 and 2000	1965 and 1977	-0,02016	0,06396	1,000	-0,1735	0,1331
			1946 and 1964	-0,10787	0,07681	0,481	-0,2920	0,0762

Post Hoc Tests - Generation Multiple Comparisons								
Dependent Variable				Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
		1965 and 1977	1978 and 2000	0,02016	0,06396	1,000	-0,1331	0,1735
			1946 and 1964	-0,08770	0,07588	0,744	-0,2696	0,0942
		1946 and 1964	1978 and 2000	0,10787	0,07681	0,481	-0,0762	0,2920
			1965 and 1977	0,08770	0,07588	0,744	-0,0942	0,2696
	Games-Howell	1978 and 2000	1965 and 1977	-0,02016	0,06494	0,948	-0,1726	0,1322
			1946 and 1964	-0,10787	0,07554	0,327	-0,2853	0,0696
		1965 and 1977	1978 and 2000	0,02016	0,06494	0,948	-0,1322	0,1726
			1946 and 1964	-0,08770	0,07296	0,452	-0,2591	0,0837
		1946 and 1964	1978 and 2000	0,10787	0,07554	0,327	-0,0696	0,2853
			1965 and 1977	0,08770	0,07296	0,452	-0,0837	0,2591
KM_O	Bonferroni	1978 and 2000	1965 and 1977	0,07828	0,04608	0,269	-0,0322	0,1887
			1946 and 1964	-0,11262	0,05534	0,126	-0,2453	0,0200
		1965 and 1977	1978 and 2000	-0,07828	0,04608	0,269	-0,1887	0,0322
			1946 and 1964	-.19090*	0,05467	0,001	-0,3219	-0,0599
		1946 and 1964	1978 and 2000	0,11262	0,05534	0,126	-0,0200	0,2453
			1965 and 1977	.19090*	0,05467	0,001	0,0599	0,3219
	Games-Howell	1978 and 2000	1965 and 1977	0,07828	0,04740	0,225	-0,0329	0,1895
			1946 and 1964	-0,11262	0,05223	0,080	-0,2353	0,0100
		1965 and 1977	1978 and 2000	-0,07828	0,04740	0,225	-0,1895	0,0329
			1946 and 1964	-.19090*	0,05118	0,001	-0,3111	-0,0707
		1946 and 1964	1978 and 2000	0,11262	0,05223	0,080	-0,0100	0,2353
			1965 and 1977	.19090*	0,05118	0,001	0,0707	0,3111
EC	Bonferroni	1978 and 2000	1965 and 1977	0,07674	0,05992	0,601	-0,0669	0,2203
			1946 and 1964	-0,05054	0,07196	1,000	-0,2230	0,1219

Post Hoc Tests - Generation Multiple Comparisons								
Dependent Variable				Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
		1965 and 1977	1978 and 2000	-0,07674	0,05992	0,601	-0,2203	0,0669
			1946 and 1964	-0,12728	0,07109	0,221	-0,2977	0,0431
		1946 and 1964	1978 and 2000	0,05054	0,07196	1,000	-0,1219	0,2230
			1965 and 1977	0,12728	0,07109	0,221	-0,0431	0,2977
	Games-Howell	1978 and 2000	1965 and 1977	0,07674	0,06124	0,422	-0,0670	0,2205
			1946 and 1964	-0,05054	0,07007	0,751	-0,2151	0,1140
		1965 and 1977	1978 and 2000	-0,07674	0,06124	0,422	-0,2205	0,0670
			1946 and 1964	-0,12728	0,06716	0,141	-0,2850	0,0305
		1946 and 1964	1978 and 2000	0,05054	0,07007	0,751	-0,1140	0,2151
			1965 and 1977	0,12728	0,06716	0,141	-0,0305	0,2850
KM_T	Bonferroni	1978 and 2000	1965 and 1977	0,00963	0,05156	1,000	-0,1139	0,1332
			1946 and 1964	-0,11293	0,06192	0,205	-0,2613	0,0355
		1965 and 1977	1978 and 2000	-0,00963	0,05156	1,000	-0,1332	0,1139
			1946 and 1964	-0,12257	0,06117	0,136	-0,2692	0,0240
		1946 and 1964	1978 and 2000	0,11293	0,06192	0,205	-0,0355	0,2613
			1965 and 1977	0,12257	0,06117	0,136	-0,0240	0,2692
	Games-Howell	1978 and 2000	1965 and 1977	0,00963	0,05326	0,982	-0,1153	0,1346
			1946 and 1964	-0,11293	0,05842	0,130	-0,2501	0,0243
		1965 and 1977	1978 and 2000	-0,00963	0,05326	0,982	-0,1346	0,1153
			1946 and 1964	-0,12257	0,05640	0,077	-0,2550	0,0099
		1946 and 1964	1978 and 2000	0,11293	0,05842	0,130	-0,0243	0,2501
			1965 and 1977	0,12257	0,05640	0,077	-0,0099	0,2550
SF	Bonferroni	1978 and 2000	1965 and 1977	.18848*	0,04905	0,000	0,0709	0,3060
			1946 and 1964	.16881*	0,05890	0,013	0,0276	0,3100

Post Hoc Tests - Generation Multiple Comparisons								
Dependent Variable				Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
		1965 and 1977	1978 and 2000	-.18848*	0,04905	0,000	-0,3060	-0,0709
			1946 and 1964	-0,01967	0,05819	1,000	-0,1591	0,1198
		1946 and 1964	1978 and 2000	-.16881*	0,05890	0,013	-0,3100	-0,0276
			1965 and 1977	0,01967	0,05819	1,000	-0,1198	0,1591
	Games-Howell	1978 and 2000	1965 and 1977	.18848*	0,05001	0,001	0,0711	0,3058
			1946 and 1964	.16881*	0,05557	0,007	0,0383	0,2993
		1965 and 1977	1978 and 2000	-.18848*	0,05001	0,001	-0,3058	-0,0711
			1946 and 1964	-0,01967	0,05606	0,934	-0,1513	0,1120
		1946 and 1964	1978 and 2000	-.16881*	0,05557	0,007	-0,2993	-0,0383
			1965 and 1977	0,01967	0,05606	0,934	-0,1120	0,1513
CR	Bonferroni	1978 and 2000	1965 and 1977	.15085*	0,05372	0,015	0,0221	0,2796
			1946 and 1964	0,06478	0,06451	0,946	-0,0898	0,2194
		1965 and 1977	1978 and 2000	-.15085*	0,05372	0,015	-0,2796	-0,0221
			1946 and 1964	-0,08607	0,06373	0,531	-0,2388	0,0667
		1946 and 1964	1978 and 2000	-0,06478	0,06451	0,946	-0,2194	0,0898
			1965 and 1977	0,08607	0,06373	0,531	-0,0667	0,2388
	Games-Howell	1978 and 2000	1965 and 1977	.15085*	0,05456	0,016	0,0228	0,2789
			1946 and 1964	0,06478	0,06212	0,550	-0,0811	0,2107
		1965 and 1977	1978 and 2000	-.15085*	0,05456	0,016	-0,2789	-0,0228
			1946 and 1964	-0,08607	0,06168	0,344	-0,2309	0,0588
		1946 and 1964	1978 and 2000	-0,06478	0,06212	0,550	-0,2107	0,0811
			1965 and 1977	0,08607	0,06168	0,344	-0,0588	0,2309
WE	Bonferroni	1978 and 2000	1965 and 1977	0,13829	0,06154	0,074	-0,0092	0,2858
			1946 and 1964	-0,12496	0,07391	0,273	-0,3021	0,0522

Post Hoc Tests - Generation Multiple Comparisons								
Dependent Variable				Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
		1965 and 1977	1978 and 2000	-0,13829	0,06154	0,074	-0,2858	0,0092
			1946 and 1964	-.26325*	0,07302	0,001	-0,4382	-0,0882
		1946 and 1964	1978 and 2000	0,12496	0,07391	0,273	-0,0522	0,3021
			1965 and 1977	.26325*	0,07302	0,001	0,0882	0,4382
	Games-Howell	1978 and 2000	1965 and 1977	0,13829	0,06273	0,071	-0,0089	0,2855
			1946 and 1964	-0,12496	0,07071	0,181	-0,2910	0,0411
		1965 and 1977	1978 and 2000	-0,13829	0,06273	0,071	-0,2855	0,0089
			1946 and 1964	-.26325*	0,07006	0,001	-0,4278	-0,0987
		1946 and 1964	1978 and 2000	0,12496	0,07071	0,181	-0,0411	0,2910
			1965 and 1977	.26325*	0,07006	0,001	0,0987	0,4278
EB	Bonferroni	1978 and 2000	1965 and 1977	.25251*	0,05361	0,000	0,1240	0,3810
			1946 and 1964	.24433*	0,06439	0,000	0,0900	0,3987
		1965 and 1977	1978 and 2000	-.25251*	0,05361	0,000	-0,3810	-0,1240
			1946 and 1964	-0,00818	0,06361	1,000	-0,1606	0,1443
		1946 and 1964	1978 and 2000	-.24433*	0,06439	0,000	-0,3987	-0,0900
			1965 and 1977	0,00818	0,06361	1,000	-0,1443	0,1606
	Games-Howell	1978 and 2000	1965 and 1977	.25251*	0,05498	0,000	0,1235	0,3815
			1946 and 1964	.24433*	0,06287	0,000	0,0967	0,3920
		1965 and 1977	1978 and 2000	-.25251*	0,05498	0,000	-0,3815	-0,1235
			1946 and 1964	-0,00818	0,05938	0,990	-0,1477	0,1313
		1946 and 1964	1978 and 2000	-.24433*	0,06287	0,000	-0,3920	-0,0967
			1965 and 1977	0,00818	0,05938	0,990	-0,1313	0,1477
JS	Bonferroni	1978 and 2000	1965 and 1977	-0,10710	0,05462	0,150	-0,2380	0,0238
			1946 and 1964	-.28099*	0,06560	0,000	-0,4382	-0,1238

Post Hoc Tests - Generation

Multiple Comparisons

Dependent Variable				Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
		1965 and 1977	1978 and 2000	0,10710	0,05462	0,150	-0,0238	0,2380
			1946 and 1964	-.17389*	0,06480	0,022	-0,3292	-0,0186
		1946 and 1964	1978 and 2000	.28099*	0,06560	0,000	0,1238	0,4382
			1965 and 1977	.17389*	0,06480	0,022	0,0186	0,3292
	Games-Howell	1978 and 2000	1965 and 1977	-0,10710	0,05693	0,145	-0,2407	0,0265
			1946 and 1964	-.28099*	0,06243	0,000	-0,4276	-0,1344
		1965 and 1977	1978 and 2000	0,10710	0,05693	0,145	-0,0265	0,2407
			1946 and 1964	-.17389*	0,05761	0,007	-0,3092	-0,0386
		1946 and 1964	1978 and 2000	.28099*	0,06243	0,000	0,1344	0,4276
			1965 and 1977	.17389*	0,05761	0,007	0,0386	0,3092

***. The mean difference is significant at the 0.05 level.**

One sample - Race									
Descriptives									
		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
LS	**African**	**843**	**3,3700**	**1,10410**	**0,03803**	**3,2954**	**3,4446**	**1,00**	**5,00**
	Coloured	80	3,2341	1,12562	0,12585	2,9836	3,4846	1,00	5,00
	Indian	54	3,2256	1,15449	0,15711	2,9105	3,5407	1,00	5,00
	White	488	3,4965	1,02810	0,04654	3,4050	3,5879	1,00	5,00
	Total	1465	3,3994	1,08424	0,02833	3,3438	3,4549	1,00	5,00
KM_O	African	843	2,9549	0,82984	0,02858	2,8988	3,0110	1,00	5,00
	Coloured	80	2,9950	0,79107	0,08844	2,8190	3,1710	1,20	4,90
	Indian	54	2,7056	0,74591	0,10151	2,5020	2,9092	1,00	4,00
	White	488	2,9760	0,69885	0,03164	2,9139	3,0382	1,00	4,90
	Total	1465	2,9549	0,78420	0,02049	2,9148	2,9951	1,00	5,00
EC	African	843	3,3836	1,06393	0,03664	3,3116	3,4555	1,00	5,00
	Coloured	80	3,3667	1,02377	0,11446	3,1388	3,5945	1,00	5,00
	Indian	54	3,3642	1,14791	0,15621	3,0509	3,6775	1,00	5,00
	White	488	3,1612	0,89640	0,04058	3,0815	3,2409	1,00	5,00
	Total	1465	3,3078	1,01654	0,02656	3,2558	3,3599	1,00	5,00
KM_T	African	843	3,6226	0,92864	0,03198	3,5598	3,6854	1,00	5,00
	Coloured	80	3,6313	0,90773	0,10149	3,4292	3,8333	1,00	5,00
	Indian	54	3,4506	0,93759	0,12759	3,1947	3,7065	1,00	5,00
	White	488	3,7370	0,75172	0,03403	3,6702	3,8039	1,00	5,00
	Total	1465	3,6548	0,87445	0,02285	3,6100	3,6996	1,00	5,00
SF	African	843	3,3707	0,84056	0,02895	3,3139	3,4275	1,00	5,00
	Coloured	80	3,1958	0,80643	0,09016	3,0164	3,3753	1,00	5,00
	Indian	54	3,0401	0,90360	0,12296	2,7935	3,2868	1,33	5,00
	White	488	2,9894	0,76309	0,03454	2,9215	3,0573	1,00	5,00

One sample - Race									
Descriptives									
		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
	Total	1465	3,2220	0,83471	0,02181	3,1792	3,2647	1,00	5,00
CR	African	843	2,9324	0,93073	0,03206	2,8695	2,9953	1,00	5,00
	Coloured	80	2,7525	0,87047	0,09732	2,5588	2,9462	1,00	5,00
	Indian	54	2,5889	0,93520	0,12726	2,3336	2,8441	1,00	4,80
	White	488	2,7508	0,86817	0,03930	2,6736	2,8280	1,00	5,00
	Total	1465	2,8494	0,91198	0,02383	2,8027	2,8962	1,00	5,00
WE	African	843	2,8272	1,06904	0,03682	2,7549	2,8995	1,00	5,00
	Coloured	80	2,7458	1,07424	0,12010	2,5068	2,9849	1,00	5,00
	Indian	54	2,1111	1,04410	0,14208	1,8261	2,3961	1,00	4,00
	White	488	2,7575	0,98085	0,04440	2,6703	2,8448	1,00	5,00
	Total	1465	2,7732	1,04739	0,02736	2,7195	2,8268	1,00	5,00
EB	African	843	2,9199	0,96894	0,03337	2,8544	2,9854	1,00	5,00
	Coloured	80	2,9021	0,92652	0,10359	2,6959	3,1083	1,00	5,00
	Indian	54	2,5340	0,83326	0,11339	2,3065	2,7614	1,00	4,33
	White	488	2,5707	0,77474	0,03507	2,5018	2,6396	1,00	5,00
	Total	1465	2,7884	0,91649	0,02394	2,7414	2,8354	1,00	5,00
JS	African	843	3,4251	1,00462	0,03460	3,3572	3,4930	1,00	5,00
	Coloured	80	3,5958	0,93636	0,10469	3,3875	3,8042	1,00	5,00
	Indian	54	3,4383	0,92445	0,12580	3,1859	3,6906	1,00	5,00
	White	488	3,6728	0,76318	0,03455	3,6049	3,7407	1,00	5,00
	Total	1465	3,5174	0,93058	0,02431	3,4697	3,5651	1,00	5,00

Test of Homogeneity of Variances				
	Levene Statistic	**df1**	**df2**	**Sig.**
LS	1,630	3	1461	0,180
KM_O	5,913	3	1461	0,001
EC	5,588	3	1461	0,001
KM_T	9,065	3	1461	0,000
SF	2,608	3	1461	0,050
CR	1,286	3	1461	0,278
WE	1,618	3	1461	0,183
EB	11,653	3	1461	0,000
JS	18,998	3	1461	0,000

Post Hoc Tests - Race Multiple Comparisons								
Dependent Variable				**Mean Difference (I-J)**	**Std. Error**	**Sig.**	**95% Confidence Interval**	
							Lower Bound	**Upper Bound**
LS	Bonferroni	African	Coloured	0,13591	0,12664	1,000	-0,1986	0,4705
			Indian	0,14441	0,15195	1,000	-0,2570	0,5458
			White	-0,12646	0,06157	0,241	-0,2891	0,0362
		Coloured	African	-0,13591	0,12664	1,000	-0,4705	0,1986
			Indian	0,00850	0,19065	1,000	-0,4952	0,5122
			White	-0,26237	0,13057	0,268	-0,6073	0,0826
		Indian	African	-0,14441	0,15195	1,000	-0,5458	0,2570
			Coloured	-0,00850	0,19065	1,000	-0,5122	0,4952
			White	-0,27087	0,15524	0,487	-0,6810	0,1393

Post Hoc Tests - Race Multiple Comparisons								
Dependent Variable				Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
		White	African	0,12646	0,06157	0,241	-0,0362	0,2891
			Coloured	0,26237	0,13057	0,268	-0,0826	0,6073
			Indian	0,27087	0,15524	0,487	-0,1393	0,6810
	Games-Howell	African	Coloured	0,13591	0,13147	0,730	-0,2080	0,4798
			Indian	0,14441	0,16164	0,808	-0,2829	0,5717
			White	-0,12646	0,06010	0,152	-0,2811	0,0282
		Coloured	African	-0,13591	0,13147	0,730	-0,4798	0,2080
			Indian	0,00850	0,20130	1,000	-0,5165	0,5335
			White	-0,26237	0,13418	0,212	-0,6128	0,0881
		Indian	African	-0,14441	0,16164	0,808	-0,5717	0,2829
			Coloured	-0,00850	0,20130	1,000	-0,5335	0,5165
			White	-0,27087	0,16385	0,357	-0,7033	0,1616
		White	African	0,12646	0,06010	0,152	-0,0282	0,2811
			Coloured	0,26237	0,13418	0,212	-0,0881	0,6128
			Indian	0,27087	0,16385	0,357	-0,1616	0,7033
KM_O	Bonferroni	African	Coloured	-0,04008	0,09165	1,000	-0,2822	0,2020
			Indian	0,24937	0,10997	0,141	-0,0411	0,5399
			White	-0,02110	0,04456	1,000	-0,1388	0,0966
		Coloured	African	0,04008	0,09165	1,000	-0,2020	0,2822
			Indian	0,28944	0,13797	0,217	-0,0751	0,6539
			White	0,01898	0,09449	1,000	-0,2307	0,2686
		Indian	African	-0,24937	0,10997	0,141	-0,5399	0,0411
			Coloured	-0,28944	0,13797	0,217	-0,6539	0,0751
			White	-0,27047	0,11235	0,097	-0,5673	0,0263

Post Hoc Tests - Race

Multiple Comparisons

Dependent Variable				Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
		White	African	0,02110	0,04456	1,000	-0,0966	0,1388
			Coloured	-0,01898	0,09449	1,000	-0,2686	0,2307
			Indian	0,27047	0,11235	0,097	-0,0263	0,5673
	Games-Howell	African	Coloured	-0,04008	0,09295	0,973	-0,2831	0,2029
			Indian	0,24937	0,10545	0,095	-0,0291	0,5278
			White	-0,02110	0,04263	0,960	-0,1308	0,0886
		Coloured	African	0,04008	0,09295	0,973	-0,2029	0,2831
			Indian	0,28944	0,13463	0,144	-0,0614	0,6403
			White	0,01898	0,09393	0,997	-0,2264	0,2644
		Indian	African	-0,24937	0,10545	0,095	-0,5278	0,0291
			Coloured	-0,28944	0,13463	0,144	-0,6403	0,0614
			White	-0,27047	0,10632	0,063	-0,5510	0,0100
		White	African	0,02110	0,04263	0,960	-0,0886	0,1308
			Coloured	-0,01898	0,09393	0,997	-0,2644	0,2264
			Indian	0,27047	0,10632	0,063	-0,0100	0,5510
EC	Bonferroni	African	Coloured	0,01688	0,11842	1,000	-0,2960	0,3297
			Indian	0,01935	0,14210	1,000	-0,3560	0,3947
			White	.22235*	0,05758	0,001	0,0702	0,3745
		Coloured	African	-0,01688	0,11842	1,000	-0,3297	0,2960
			Indian	0,00247	0,17828	1,000	-0,4685	0,4735
			White	0,20546	0,12210	0,556	-0,1171	0,5280
		Indian	African	-0,01935	0,14210	1,000	-0,3947	0,3560
			Coloured	-0,00247	0,17828	1,000	-0,4735	0,4685
			White	0,20300	0,14517	0,973	-0,1805	0,5865

Post Hoc Tests - Race

Multiple Comparisons

Dependent Variable				Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
		White	African	-.22235*	0,05758	0,001	-0,3745	-0,0702
			Coloured	-0,20546	0,12210	0,556	-0,5280	0,1171
			Indian	-0,20300	0,14517	0,973	-0,5865	0,1805
	Games-Howell	African	Coloured	0,01688	0,12018	0,999	-0,2974	0,3311
			Indian	0,01935	0,16045	0,999	-0,4048	0,4436
			White	.22235*	0,05467	0,000	0,0817	0,3630
		Coloured	African	-0,01688	0,12018	0,999	-0,3311	0,2974
			Indian	0,00247	0,19366	1,000	-0,5031	0,5080
			White	0,20546	0,12144	0,333	-0,1118	0,5228
		Indian	African	-0,01935	0,16045	0,999	-0,4436	0,4048
			Coloured	-0,00247	0,19366	1,000	-0,5080	0,5031
			White	0,20300	0,16139	0,593	-0,2234	0,6294
		White	African	-.22235*	0,05467	0,000	-0,3630	-0,0817
			Coloured	-0,20546	0,12144	0,333	-0,5228	0,1118
			Indian	-0,20300	0,16139	0,593	-0,6294	0,2234
KM_T	Bonferroni	African	Coloured	-0,00867	0,10211	1,000	-0,2784	0,2611
			Indian	0,17196	0,12252	0,964	-0,1517	0,4956
			White	-0,11444	0,04965	0,128	-0,2456	0,0167
		Coloured	African	0,00867	0,10211	1,000	-0,2611	0,2784
			Indian	0,18063	0,15372	1,000	-0,2255	0,5867
			White	-0,10577	0,10528	1,000	-0,3839	0,1724
		Indian	African	-0,17196	0,12252	0,964	-0,4956	0,1517
			Coloured	-0,18063	0,15372	1,000	-0,5867	0,2255
			White	-0,28640	0,12517	0,134	-0,6171	0,0443

Post Hoc Tests - Race

Multiple Comparisons

Dependent Variable				Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
		White	African	0,11444	0,04965	0,128	-0,0167	0,2456
			Coloured	0,10577	0,10528	1,000	-0,1724	0,3839
			Indian	0,28640	0,12517	0,134	-0,0443	0,6171
	Games-Howell	African	Coloured	-0,00867	0,10641	1,000	-0,2869	0,2696
			Indian	0,17196	0,13154	0,562	-0,1757	0,5196
			White	-0,11444	0,04670	0,068	-0,2346	0,0057
		Coloured	African	0,00867	0,10641	1,000	-0,2696	0,2869
			Indian	0,18063	0,16303	0,685	-0,2446	0,6059
			White	-0,10577	0,10704	0,757	-0,3856	0,1740
		Indian	African	-0,17196	0,13154	0,562	-0,5196	0,1757
			Coloured	-0,18063	0,16303	0,685	-0,6059	0,2446
			White	-0,28640	0,13205	0,144	-0,6352	0,0624
		White	African	0,11444	0,04670	0,068	-0,0057	0,2346
			Coloured	0,10577	0,10704	0,757	-0,1740	0,3856
			Indian	0,28640	0,13205	0,144	-0,0624	0,6352
SF	Bonferroni	African	Coloured	0,17487	0,09548	0,403	-0,0774	0,4271
			Indian	.33058*	0,11456	0,024	0,0279	0,6332
			White	.38129*	0,04642	0,000	0,2586	0,5039
		Coloured	African	-0,17487	0,09548	0,403	-0,4271	0,0774
			Indian	0,15571	0,14374	1,000	-0,2240	0,5354
			White	0,20642	0,09844	0,217	-0,0536	0,4665
		Indian	African	-.33058*	0,11456	0,024	-0,6332	-0,0279
			Coloured	-0,15571	0,14374	1,000	-0,5354	0,2240
			White	0,05071	0,11705	1,000	-0,2585	0,3599

Post Hoc Tests - Race

Multiple Comparisons

Dependent Variable				Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
		White	African	-.38129*	0,04642	0,000	-0,5039	-0,2586
			Coloured	-0,20642	0,09844	0,217	-0,4665	0,0536
			Indian	-0,05071	0,11705	1,000	-0,3599	0,2585
	Games-Howell	African	Coloured	0,17487	0,09470	0,258	-0,0727	0,4225
			Indian	0,33058	0,12633	0,053	-0,0034	0,6646
			White	.38129*	0,04507	0,000	0,2653	0,4973
		Coloured	African	-0,17487	0,09470	0,258	-0,4225	0,0727
			Indian	0,15571	0,15248	0,737	-0,2424	0,5538
			White	0,20642	0,09655	0,148	-0,0457	0,4585
		Indian	African	-0,33058	0,12633	0,053	-0,6646	0,0034
			Coloured	-0,15571	0,15248	0,737	-0,5538	0,2424
			White	0,05071	0,12772	0,979	-0,2865	0,3880
		White	African	-.38129*	0,04507	0,000	-0,4973	-0,2653
			Coloured	-0,20642	0,09655	0,148	-0,4585	0,0457
			Indian	-0,05071	0,12772	0,979	-0,3880	0,2865
CR	Bonferroni	African	Coloured	0,17988	0,10614	0,542	-0,1005	0,4603
			Indian	.34350*	0,12736	0,042	0,0070	0,6800
			White	.18156*	0,05161	0,003	0,0452	0,3179
		Coloured	African	-0,17988	0,10614	0,542	-0,4603	0,1005
			Indian	0,16361	0,15979	1,000	-0,2585	0,5858
			White	0,00168	0,10944	1,000	-0,2874	0,2908
		Indian	African	-.34350*	0,12736	0,042	-0,6800	-0,0070
			Coloured	-0,16361	0,15979	1,000	-0,5858	0,2585
			White	-0,16193	0,13012	1,000	-0,5057	0,1818

Post Hoc Tests - Race

Multiple Comparisons

Dependent Variable				Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
		White	African	-.18156*	0,05161	0,003	-0,3179	-0,0452
			Coloured	-0,00168	0,10944	1,000	-0,2908	0,2874
			Indian	0,16193	0,13012	1,000	-0,1818	0,5057
	Games-Howell	African	Coloured	0,17988	0,10246	0,301	-0,0880	0,4477
			Indian	0,34350	0,13124	0,053	-0,0033	0,6903
			White	.18156*	0,05072	0,002	0,0511	0,3121
		Coloured	African	-0,17988	0,10246	0,301	-0,4477	0,0880
			Indian	0,16361	0,16021	0,737	-0,2544	0,5817
			White	0,00168	0,10496	1,000	-0,2723	0,2756
		Indian	African	-0,34350	0,13124	0,053	-0,6903	0,0033
			Coloured	-0,16361	0,16021	0,737	-0,5817	0,2544
			White	-0,16193	0,13319	0,619	-0,5133	0,1895
		White	African	-.18156*	0,05072	0,002	-0,3121	-0,0511
			Coloured	-0,00168	0,10496	1,000	-0,2756	0,2723
			Indian	0,16193	0,13319	0,619	-0,1895	0,5133
WE	Bonferroni	African	Coloured	0,08137	0,12165	1,000	-0,2400	0,4028
			Indian	.71609*	0,14597	0,000	0,3305	1,1017
			White	0,06969	0,05915	1,000	-0,0866	0,2259
		Coloured	African	-0,08137	0,12165	1,000	-0,4028	0,2400
			Indian	.63472*	0,18314	0,003	0,1509	1,1185
			White	-0,01168	0,12543	1,000	-0,3430	0,3197
		Indian	African	-.71609*	0,14597	0,000	-1,1017	-0,3305
			Coloured	-.63472*	0,18314	0,003	-1,1185	-0,1509
			White	-.64640*	0,14913	0,000	-1,0404	-0,2524

Post Hoc Tests - Race

Multiple Comparisons

Dependent Variable				Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
		White	African	-0,06969	0,05915	1,000	-0,2259	0,0866
			Coloured	0,01168	0,12543	1,000	-0,3197	0,3430
			Indian	.64640*	0,14913	0,000	0,2524	1,0404
	Games-Howell	African	Coloured	0,08137	0,12562	0,916	-0,2472	0,4099
			Indian	.71609*	0,14678	0,000	0,3283	1,1039
			White	0,06969	0,05768	0,622	-0,0787	0,2181
		Coloured	African	-0,08137	0,12562	0,916	-0,4099	0,2472
			Indian	.63472*	0,18605	0,005	0,1498	1,1197
			White	-0,01168	0,12805	1,000	-0,3461	0,3228
		Indian	African	-.71609*	0,14678	0,000	-1,1039	-0,3283
			Coloured	-.63472*	0,18605	0,005	-1,1197	-0,1498
			White	-.64640*	0,14886	0,000	-1,0391	-0,2537
		White	African	-0,06969	0,05768	0,622	-0,2181	0,0787
			Coloured	0,01168	0,12805	1,000	-0,3228	0,3461
			Indian	.64640*	0,14886	0,000	0,2537	1,0391
EB	Bonferroni	African	Coloured	0,01785	0,10547	1,000	-0,2608	0,2965
			Indian	.38598*	0,12655	0,014	0,0516	0,7203
			White	.34923*	0,05128	0,000	0,2138	0,4847
		Coloured	African	-0,01785	0,10547	1,000	-0,2965	0,2608
			Indian	0,36813	0,15878	0,123	-0,0513	0,7876
			White	.33139*	0,10874	0,014	0,0441	0,6187
		Indian	African	-.38598*	0,12655	0,014	-0,7203	-0,0516
			Coloured	-0,36813	0,15878	0,123	-0,7876	0,0513
			White	-0,03675	0,12929	1,000	-0,3783	0,3048

Post Hoc Tests - Race

Multiple Comparisons

Dependent Variable				Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
		White	African	-.34923*	0,05128	0,000	-0,4847	-0,2138
			Coloured	-.33139*	0,10874	0,014	-0,6187	-0,0441
			Indian	0,03675	0,12929	1,000	-0,3048	0,3783
	Games-Howell	African	Coloured	0,01785	0,10883	0,998	-0,2667	0,3024
			Indian	.38598*	0,11820	0,009	0,0740	0,6980
			White	.34923*	0,04841	0,000	0,2247	0,4738
		Coloured	African	-0,01785	0,10883	0,998	-0,3024	0,2667
			Indian	0,36813	0,15358	0,083	-0,0319	0,7682
			White	.33139*	0,10936	0,016	0,0455	0,6172
		Indian	African	-.38598*	0,11820	0,009	-0,6980	-0,0740
			Coloured	-0,36813	0,15358	0,083	-0,7682	0,0319
			White	-0,03675	0,11869	0,990	-0,3499	0,2764
		White	African	-.34923*	0,04841	0,000	-0,4738	-0,2247
			Coloured	-.33139*	0,10936	0,016	-0,6172	-0,0455
			Indian	0,03675	0,11869	0,990	-0,2764	0,3499
JS	Bonferroni	African	Coloured	-0,17076	0,10812	0,687	-0,4564	0,1149
			Indian	-0,01320	0,12974	1,000	-0,3560	0,3295
			White	-.24775*	0,05257	0,000	-0,3866	-0,1089
		Coloured	African	0,17076	0,10812	0,687	-0,1149	0,4564
			Indian	0,15756	0,16278	1,000	-0,2725	0,5876
			White	-0,07698	0,11148	1,000	-0,3715	0,2175
		Indian	African	0,01320	0,12974	1,000	-0,3295	0,3560
			Coloured	-0,15756	0,16278	1,000	-0,5876	0,2725
			White	-0,23454	0,13255	0,462	-0,5847	0,1156

Post Hoc Tests - Race

Multiple Comparisons

Dependent Variable				Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
		White	African	.24775*	0,05257	0,000	0,1089	0,3866
			Coloured	0,07698	0,11148	1,000	-0,2175	0,3715
			Indian	0,23454	0,13255	0,462	-0,1156	0,5847
	Games-Howell	African	Coloured	-0,17076	0,11026	0,413	-0,4590	0,1175
			Indian	-0,01320	0,13047	1,000	-0,3578	0,3314
			White	-.24775*	0,04890	0,000	-0,3735	-0,1220
		Coloured	African	0,17076	0,11026	0,413	-0,1175	0,4590
			Indian	0,15756	0,16366	0,771	-0,2691	0,5842
			White	-0,07698	0,11024	0,898	-0,3652	0,2112
		Indian	African	0,01320	0,13047	1,000	-0,3314	0,3578
			Coloured	-0,15756	0,16366	0,771	-0,5842	0,2691
			White	-0,23454	0,13046	0,284	-0,5791	0,1100
		White	African	.24775*	0,04890	0,000	0,1220	0,3735
			Coloured	0,07698	0,11024	0,898	-0,2112	0,3652
			Indian	0,23454	0,13046	0,284	-0,1100	0,5791

***. The mean difference is significant at the 0.05 level.**

One sample – Job Levels									
Descriptives									
		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
LS	A1 - A3	23	3,0791	1,25618	0,26193	2,5358	3,6223	1,09	4,64
	B1 - B5	171	3,3227	1,05503	0,08068	3,1634	3,4820	1,00	5,00
	C1 - C5	753	3,4077	1,09216	0,03980	3,3296	3,4858	1,00	5,00
	D1 - D5	493	3,4014	1,07730	0,04852	3,3061	3,4968	1,00	5,00
	E1 - E3	23	3,9407	0,90146	0,18797	3,5509	4,3305	1,27	5,00
	Total	1463	3,3989	1,08465	0,02836	3,3432	3,4545	1,00	5,00
KM_O	A1 - A3	23	2,9739	0,79785	0,16636	2,6289	3,3189	1,40	4,40
	B1 - B5	171	3,0754	0,82632	0,06319	2,9507	3,2002	1,00	5,00
	C1 - C5	753	2,9345	0,78943	0,02877	2,8781	2,9910	1,00	5,00
	D1 - D5	493	2,9323	0,75452	0,03398	2,8655	2,9990	1,00	5,00
	E1 - E3	23	3,2261	0,77237	0,16105	2,8921	3,5601	1,00	4,10
	Total	1463	2,9554	0,78316	0,02048	2,9153	2,9956	1,00	5,00
EC	A1 - A3	23	3,2174	1,28946	0,26887	2,6598	3,7750	1,00	5,00
	B1 - B5	171	3,4951	0,98043	0,07498	3,3471	3,6431	1,00	5,00
	C1 - C5	753	3,3214	1,02568	0,03738	3,2480	3,3948	1,00	5,00
	D1 - D5	493	3,2265	0,98697	0,04445	3,1392	3,3138	1,00	5,00
	E1 - E3	23	3,4058	1,11444	0,23238	2,9239	3,8877	1,00	5,00
	Total	1463	3,3094	1,01544	0,02655	3,2573	3,3615	1,00	5,00
KM_T	A1 - A3	23	3,3551	1,08281	0,22578	2,8868	3,8233	1,00	4,83
	B1 - B5	171	3,6881	0,89453	0,06841	3,5531	3,8231	1,33	5,00
	C1 - C5	753	3,6483	0,86875	0,03166	3,5861	3,7104	1,00	5,00
	D1 - D5	493	3,6653	0,85784	0,03864	3,5894	3,7412	1,00	5,00
	E1 - E3	23	3,8478	0,90162	0,18800	3,4579	4,2377	1,17	5,00
	Total	1463	3,6572	0,87232	0,02281	3,6125	3,7019	1,00	5,00

One sample – Job Levels									
Descriptives									
		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
SF	A1 - A3	23	3,4058	0,96769	0,20178	2,9873	3,8243	1,00	5,00
	B1 - B5	171	3,3782	0,79619	0,06089	3,2580	3,4984	1,00	5,00
	C1 - C5	753	3,1711	0,80026	0,02916	3,1138	3,2283	1,00	5,00
	D1 - D5	493	3,2126	0,87879	0,03958	3,1349	3,2904	1,00	5,00
	E1 - E3	23	3,7246	0,80499	0,16785	3,3765	4,0727	1,33	4,83
	Total	1463	3,2217	0,83401	0,02180	3,1789	3,2645	1,00	5,00
CR	A1 - A3	23	2,7739	0,89505	0,18663	2,3869	3,1610	1,00	4,40
	B1 - B5	171	2,9532	0,90237	0,06901	2,8170	3,0894	1,00	5,00
	C1 - C5	753	2,8842	0,90928	0,03314	2,8191	2,9492	1,00	5,00
	D1 - D5	493	2,7594	0,92726	0,04176	2,6774	2,8415	1,00	5,00
	E1 - E3	23	2,9304	0,61084	0,12737	2,6663	3,1946	1,40	4,00
	Total	1463	2,8492	0,91202	0,02384	2,8024	2,8960	1,00	5,00
WE	A1 - A3	23	2,6667	1,01504	0,21165	2,2277	3,1056	1,00	5,00
	B1 - B5	171	2,9981	0,96913	0,07411	2,8518	3,1443	1,00	5,00
	C1 - C5	753	2,8380	1,06220	0,03871	2,7620	2,9140	1,00	5,00
	D1 - D5	493	2,6362	1,03145	0,04645	2,5450	2,7275	1,00	5,00
	E1 - E3	23	2,1159	0,85048	0,17734	1,7482	2,4837	1,00	4,00
	Total	1463	2,7747	1,04658	0,02736	2,7210	2,8283	1,00	5,00
EB	A1 - A3	23	3,0507	0,87536	0,18252	2,6722	3,4293	1,00	4,33
	B1 - B5	171	3,2953	0,87074	0,06659	3,1639	3,4268	1,00	5,00
	C1 - C5	753	2,8878	0,92811	0,03382	2,8214	2,9542	1,00	5,00
	D1 - D5	493	2,4726	0,79710	0,03590	2,4021	2,5432	1,00	5,00
	E1 - E3	23	2,2464	0,70149	0,14627	1,9430	2,5497	1,17	3,83
	Total	1463	2,7880	0,91567	0,02394	2,7410	2,8350	1,00	5,00

One sample – Job Levels

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
JS	A1 - A3	23	3,4203	1,17300	0,24459	2,9130	3,9275	1,00	5,00
	B1 - B5	171	3,4522	1,02811	0,07862	3,2970	3,6074	1,00	5,00
	C1 - C5	753	3,4396	0,96001	0,03498	3,3709	3,5083	1,00	5,00
	D1 - D5	493	3,6552	0,81462	0,03669	3,5831	3,7273	1,00	5,00
	E1 - E3	23	3,7826	0,83248	0,17358	3,4226	4,1426	1,67	5,00
	Total	1463	3,5188	0,92880	0,02428	3,4712	3,5664	1,00	5,00

Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
LS	1,732	4	1458	0,140
KM_O	0,570	4	1458	0,684
EC	1,419	4	1458	0,225
KM_T	1,306	4	1458	0,266
SF	2,999	4	1458	0,018
CR	2,197	4	1458	0,067
WE	1,948	4	1458	0,100
EB	5,081	4	1458	0,000
JS	7,637	4	1458	0,000

Post Hoc Tests – Job Levels Multiple Comparisons								
Dependent Variable				Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
LS	Bonferroni	A1 - A3	B1 - B5	-0,24365	0,24051	1,000	-0,9198	0,4325
			C1 - C5	-0,32865	0,22923	1,000	-0,9731	0,3158
			D1 - D5	-0,32239	0,23101	1,000	-0,9718	0,3271
			E1 - E3	-0,86166	0,31934	0,071	-1,7594	0,0361
		B1 - B5	A1 - A3	0,24365	0,24051	1,000	-0,4325	0,9198
			C1 - C5	-0,08500	0,09174	1,000	-0,3429	0,1729
			D1 - D5	-0,07874	0,09611	1,000	-0,3489	0,1915
			E1 - E3	-0,61801	0,24051	0,103	-1,2942	0,0581
		C1 - C5	A1 - A3	0,32865	0,22923	1,000	-0,3158	0,9731
			B1 - B5	0,08500	0,09174	1,000	-0,1729	0,3429
			D1 - D5	0,00626	0,06274	1,000	-0,1701	0,1826
			E1 - E3	-0,53301	0,22923	0,202	-1,1774	0,1114
		D1 - D5	A1 - A3	0,32239	0,23101	1,000	-0,3271	0,9718
			B1 - B5	0,07874	0,09611	1,000	-0,1915	0,3489
			C1 - C5	-0,00626	0,06274	1,000	-0,1826	0,1701
			E1 - E3	-0,53927	0,23101	0,197	-1,1887	0,1102
		E1 - E3	A1 - A3	0,86166	0,31934	0,071	-0,0361	1,7594
			B1 - B5	0,61801	0,24051	0,103	-0,0581	1,2942
			C1 - C5	0,53301	0,22923	0,202	-0,1114	1,1774
			D1 - D5	0,53927	0,23101	0,197	-0,1102	1,1887
	Games-Howell	A1 - A3	B1 - B5	-0,24365	0,27408	0,898	-1,0455	0,5582
			C1 - C5	-0,32865	0,26494	0,728	-1,1117	0,4544
			D1 - D5	-0,32239	0,26639	0,746	-1,1084	0,4636
			E1 - E3	-0,86166	0,32240	0,076	-1,7826	0,0592
		B1 - B5	A1 - A3	0,24365	0,27408	0,898	-0,5582	1,0455

Post Hoc Tests – Job Levels
Multiple Comparisons

Dependent Variable				Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
			C1 - C5	-0,08500	0,08996	0,879	-0,3321	0,1621
			D1 - D5	-0,07874	0,09415	0,919	-0,3371	0,1796
			E1 - E3	-.61801*	0,20455	0,038	-1,2105	-0,0255
		C1 - C5	A1 - A3	0,32865	0,26494	0,728	-0,4544	1,1117
			B1 - B5	0,08500	0,08996	0,879	-0,1621	0,3321
			D1 - D5	0,00626	0,06276	1,000	-0,1652	0,1777
			E1 - E3	-0,53301	0,19213	0,072	-1,0990	0,0330
		D1 - D5	A1 - A3	0,32239	0,26639	0,746	-0,4636	1,1084
			B1 - B5	0,07874	0,09415	0,919	-0,1796	0,3371
			C1 - C5	-0,00626	0,06276	1,000	-0,1777	0,1652
			E1 - E3	-0,53927	0,19413	0,070	-1,1094	0,0308
		E1 - E3	A1 - A3	0,86166	0,32240	0,076	-0,0592	1,7826
			B1 - B5	.61801*	0,20455	0,038	0,0255	1,2105
			C1 - C5	0,53301	0,19213	0,072	-0,0330	1,0990
			D1 - D5	0,53927	0,19413	0,070	-0,0308	1,1094
KM_O	Bonferroni	A1 - A3	B1 - B5	-0,10153	0,17371	1,000	-0,5899	0,3868
			C1 - C5	0,03938	0,16556	1,000	-0,4261	0,5048
			D1 - D5	0,04166	0,16685	1,000	-0,4274	0,5107
			E1 - E3	-0,25217	0,23064	1,000	-0,9006	0,3962
		B1 - B5	A1 - A3	0,10153	0,17371	1,000	-0,3868	0,5899
			C1 - C5	0,14091	0,06626	0,336	-0,0454	0,3272
			D1 - D5	0,14319	0,06941	0,393	-0,0520	0,3383
			E1 - E3	-0,15065	0,17371	1,000	-0,6390	0,3377
		C1 - C5	A1 - A3	-0,03938	0,16556	1,000	-0,5048	0,4261
			B1 - B5	-0,14091	0,06626	0,336	-0,3272	0,0454

Post Hoc Tests – Job Levels Multiple Comparisons								
Dependent Variable				Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
			D1 - D5	0,00228	0,04531	1,000	-0,1251	0,1297
			E1 - E3	-0,29156	0,16556	0,784	-0,7570	0,1739
		D1 - D5	A1 - A3	-0,04166	0,16685	1,000	-0,5107	0,4274
			B1 - B5	-0,14319	0,06941	0,393	-0,3383	0,0520
			C1 - C5	-0,00228	0,04531	1,000	-0,1297	0,1251
			E1 - E3	-0,29384	0,16685	0,784	-0,7629	0,1752
		E1 - E3	A1 - A3	0,25217	0,23064	1,000	-0,3962	0,9006
			B1 - B5	0,15065	0,17371	1,000	-0,3377	0,6390
			C1 - C5	0,29156	0,16556	0,784	-0,1739	0,7570
			D1 - D5	0,29384	0,16685	0,784	-0,1752	0,7629
	Games-Howell	A1 - A3	B1 - B5	-0,10153	0,17796	0,978	-0,6191	0,4161
			C1 - C5	0,03938	0,16883	0,999	-0,4591	0,5379
			D1 - D5	0,04166	0,16980	0,999	-0,4588	0,5421
			E1 - E3	-0,25217	0,23155	0,811	-0,9107	0,4064
		B1 - B5	A1 - A3	0,10153	0,17796	0,978	-0,4161	0,6191
			C1 - C5	0,14091	0,06943	0,255	-0,0499	0,3317
			D1 - D5	0,14319	0,07175	0,271	-0,0538	0,3402
			E1 - E3	-0,15065	0,17300	0,905	-0,6533	0,3520
		C1 - C5	A1 - A3	-0,03938	0,16883	0,999	-0,5379	0,4591
			B1 - B5	-0,14091	0,06943	0,255	-0,3317	0,0499
			D1 - D5	0,00228	0,04452	1,000	-0,1194	0,1239
			E1 - E3	-0,29156	0,16360	0,407	-0,7745	0,1913
		D1 - D5	A1 - A3	-0,04166	0,16980	0,999	-0,5421	0,4588
			B1 - B5	-0,14319	0,07175	0,271	-0,3402	0,0538
			C1 - C5	-0,00228	0,04452	1,000	-0,1239	0,1194

Post Hoc Tests – Job Levels Multiple Comparisons								
Dependent Variable				Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
			E1 - E3	-0,29384	0,16460	0,405	-0,7787	0,1911
		E1 - E3	A1 - A3	0,25217	0,23155	0,811	-0,4064	0,9107
			B1 - B5	0,15065	0,17300	0,905	-0,3520	0,6533
			C1 - C5	0,29156	0,16360	0,407	-0,1913	0,7745
			D1 - D5	0,29384	0,16460	0,405	-0,1911	0,7787
EC	Bonferroni	A1 - A3	B1 - B5	-0,27774	0,22510	1,000	-0,9106	0,3551
			C1 - C5	-0,10399	0,21454	1,000	-0,7071	0,4991
			D1 - D5	-0,00911	0,21621	1,000	-0,6169	0,5987
			E1 - E3	-0,18841	0,29887	1,000	-1,0286	0,6518
		B1 - B5	A1 - A3	0,27774	0,22510	1,000	-0,3551	0,9106
			C1 - C5	0,17375	0,08586	0,432	-0,0676	0,4151
			D1 - D5	.26862*	0,08995	0,029	0,0157	0,5215
			E1 - E3	0,08933	0,22510	1,000	-0,5435	0,7222
		C1 - C5	A1 - A3	0,10399	0,21454	1,000	-0,4991	0,7071
			B1 - B5	-0,17375	0,08586	0,432	-0,4151	0,0676
			D1 - D5	0,09488	0,05872	1,000	-0,0702	0,2600
			E1 - E3	-0,08442	0,21454	1,000	-0,6875	0,5187
		D1 - D5	A1 - A3	0,00911	0,21621	1,000	-0,5987	0,6169
			B1 - B5	-.26862*	0,08995	0,029	-0,5215	-0,0157
			C1 - C5	-0,09488	0,05872	1,000	-0,2600	0,0702
			E1 - E3	-0,17929	0,21621	1,000	-0,7871	0,4285
		E1 - E3	A1 - A3	0,18841	0,29887	1,000	-0,6518	1,0286
			B1 - B5	-0,08933	0,22510	1,000	-0,7222	0,5435
			C1 - C5	0,08442	0,21454	1,000	-0,5187	0,6875
			D1 - D5	0,17929	0,21621	1,000	-0,4285	0,7871

Post Hoc Tests – Job Levels
Multiple Comparisons

Dependent Variable				Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
	Games-Howell	A1 - A3	B1 - B5	-0,27774	0,27913	0,855	-1,0962	0,5408
			C1 - C5	-0,10399	0,27146	0,995	-0,9068	0,6988
			D1 - D5	-0,00911	0,27252	1,000	-0,8141	0,7959
			E1 - E3	-0,18841	0,35537	0,984	-1,2000	0,8232
		B1 - B5	A1 - A3	0,27774	0,27913	0,855	-0,5408	1,0962
			C1 - C5	0,17375	0,08378	0,235	-0,0564	0,4039
			D1 - D5	.26862*	0,08716	0,019	0,0294	0,5078
			E1 - E3	0,08933	0,24417	0,996	-0,6242	0,8029
		C1 - C5	A1 - A3	0,10399	0,27146	0,995	-0,6988	0,9068
			B1 - B5	-0,17375	0,08378	0,235	-0,4039	0,0564
			D1 - D5	0,09488	0,05808	0,476	-0,0638	0,2536
			E1 - E3	-0,08442	0,23536	0,996	-0,7798	0,6110
		D1 - D5	A1 - A3	0,00911	0,27252	1,000	-0,7959	0,8141
			B1 - B5	-.26862*	0,08716	0,019	-0,5078	-0,0294
			C1 - C5	-0,09488	0,05808	0,476	-0,2536	0,0638
			E1 - E3	-0,17929	0,23659	0,940	-0,8771	0,5185
		E1 - E3	A1 - A3	0,18841	0,35537	0,984	-0,8232	1,2000
			B1 - B5	-0,08933	0,24417	0,996	-0,8029	0,6242
			C1 - C5	0,08442	0,23536	0,996	-0,6110	0,7798
			D1 - D5	0,17929	0,23659	0,940	-0,5185	0,8771
KM_T	Bonferroni	A1 - A3	B1 - B5	-0,33304	0,19373	0,858	-0,8777	0,2116
			C1 - C5	-0,29322	0,18464	1,000	-0,8123	0,2258
			D1 - D5	-0,31024	0,18607	0,957	-0,8334	0,2129
			E1 - E3	-0,49275	0,25722	0,556	-1,2159	0,2304
		B1 - B5	A1 - A3	0,33304	0,19373	0,858	-0,2116	0,8777

Post Hoc Tests – Job Levels
Multiple Comparisons

Dependent Variable				Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
			C1 - C5	0,03981	0,07389	1,000	-0,1679	0,2475
			D1 - D5	0,02279	0,07741	1,000	-0,1948	0,2404
			E1 - E3	-0,15972	0,19373	1,000	-0,7043	0,3849
		C1 - C5	A1 - A3	0,29322	0,18464	1,000	-0,2258	0,8123
			B1 - B5	-0,03981	0,07389	1,000	-0,2475	0,1679
			D1 - D5	-0,01702	0,05053	1,000	-0,1591	0,1250
			E1 - E3	-0,19953	0,18464	1,000	-0,7186	0,3195
		D1 - D5	A1 - A3	0,31024	0,18607	0,957	-0,2129	0,8334
			B1 - B5	-0,02279	0,07741	1,000	-0,2404	0,1948
			C1 - C5	0,01702	0,05053	1,000	-0,1250	0,1591
			E1 - E3	-0,18251	0,18607	1,000	-0,7056	0,3406
		E1 - E3	A1 - A3	0,49275	0,25722	0,556	-0,2304	1,2159
			B1 - B5	0,15972	0,19373	1,000	-0,3849	0,7043
			C1 - C5	0,19953	0,18464	1,000	-0,3195	0,7186
			D1 - D5	0,18251	0,18607	1,000	-0,3406	0,7056
	Games-Howell	A1 - A3	B1 - B5	-0,33304	0,23592	0,626	-1,0235	0,3575
			C1 - C5	-0,29322	0,22799	0,702	-0,9675	0,3810
			D1 - D5	-0,31024	0,22906	0,661	-0,9866	0,3662
			E1 - E3	-0,49275	0,29381	0,458	-1,3295	0,3440
		B1 - B5	A1 - A3	0,33304	0,23592	0,626	-0,3575	1,0235
			C1 - C5	0,03981	0,07538	0,984	-0,1673	0,2469
			D1 - D5	0,02279	0,07856	0,998	-0,1929	0,2385
			E1 - E3	-0,15972	0,20006	0,929	-0,7424	0,4229
		C1 - C5	A1 - A3	0,29322	0,22799	0,702	-0,3810	0,9675
			B1 - B5	-0,03981	0,07538	0,984	-0,2469	0,1673

Post Hoc Tests – Job Levels Multiple Comparisons								
Dependent Variable				Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
			D1 - D5	-0,01702	0,04995	0,997	-0,1535	0,1195
			E1 - E3	-0,19953	0,19065	0,831	-0,7626	0,3635
		D1 - D5	A1 - A3	0,31024	0,22906	0,661	-0,3662	0,9866
			B1 - B5	-0,02279	0,07856	0,998	-0,2385	0,1929
			C1 - C5	0,01702	0,04995	0,997	-0,1195	0,1535
			E1 - E3	-0,18251	0,19193	0,874	-0,7481	0,3831
		E1 - E3	A1 - A3	0,49275	0,29381	0,458	-0,3440	1,3295
			B1 - B5	0,15972	0,20006	0,929	-0,4229	0,7424
			C1 - C5	0,19953	0,19065	0,831	-0,3635	0,7626
			D1 - D5	0,18251	0,19193	0,874	-0,3831	0,7481
SF	Bonferroni	A1 - A3	B1 - B5	0,02763	0,18432	1,000	-0,4905	0,5458
			C1 - C5	0,23470	0,17567	1,000	-0,2592	0,7286
			D1 - D5	0,19315	0,17704	1,000	-0,3046	0,6909
			E1 - E3	-0,31884	0,24472	1,000	-1,0068	0,3692
		B1 - B5	A1 - A3	-0,02763	0,18432	1,000	-0,5458	0,4905
			C1 - C5	.20707*	0,07030	0,033	0,0094	0,4047
			D1 - D5	0,16552	0,07365	0,248	-0,0415	0,3726
			E1 - E3	-0,34647	0,18432	0,603	-0,8646	0,1717
		C1 - C5	A1 - A3	-0,23470	0,17567	1,000	-0,7286	0,2592
			B1 - B5	-.20707*	0,07030	0,033	-0,4047	-0,0094
			D1 - D5	-0,04155	0,04808	1,000	-0,1767	0,0936
			E1 - E3	-.55354*	0,17567	0,017	-1,0474	-0,0597
		D1 - D5	A1 - A3	-0,19315	0,17704	1,000	-0,6909	0,3046
			B1 - B5	-0,16552	0,07365	0,248	-0,3726	0,0415
			C1 - C5	0,04155	0,04808	1,000	-0,0936	0,1767

Post Hoc Tests – Job Levels Multiple Comparisons								
Dependent Variable				Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
			E1 - E3	-.51199*	0,17704	0,039	-1,0097	-0,0143
		E1 - E3	A1 - A3	0,31884	0,24472	1,000	-0,3692	1,0068
			B1 - B5	0,34647	0,18432	0,603	-0,1717	0,8646
			C1 - C5	.55354*	0,17567	0,017	0,0597	1,0474
			D1 - D5	.51199*	0,17704	0,039	0,0143	1,0097
	Games-Howell	A1 - A3	B1 - B5	0,02763	0,21076	1,000	-0,5893	0,6446
			C1 - C5	0,23470	0,20387	0,778	-0,3681	0,8375
			D1 - D5	0,19315	0,20562	0,879	-0,4132	0,7995
			E1 - E3	-0,31884	0,26247	0,743	-1,0664	0,4287
		B1 - B5	A1 - A3	-0,02763	0,21076	1,000	-0,6446	0,5893
			C1 - C5	.20707*	0,06751	0,020	0,0216	0,3926
			D1 - D5	0,16552	0,07262	0,154	-0,0337	0,3647
			E1 - E3	-0,34647	0,17855	0,320	-0,8666	0,1736
		C1 - C5	A1 - A3	-0,23470	0,20387	0,778	-0,8375	0,3681
			B1 - B5	-.20707*	0,06751	0,020	-0,3926	-0,0216
			D1 - D5	-0,04155	0,04916	0,916	-0,1759	0,0928
			E1 - E3	-.55354*	0,17037	0,026	-1,0565	-0,0505
		D1 - D5	A1 - A3	-0,19315	0,20562	0,879	-0,7995	0,4132
			B1 - B5	-0,16552	0,07262	0,154	-0,3647	0,0337
			C1 - C5	0,04155	0,04916	0,916	-0,0928	0,1759
			E1 - E3	-.51199*	0,17245	0,047	-1,0192	-0,0048
		E1 - E3	A1 - A3	0,31884	0,26247	0,743	-0,4287	1,0664
			B1 - B5	0,34647	0,17855	0,320	-0,1736	0,8666
			C1 - C5	.55354*	0,17037	0,026	0,0505	1,0565
			D1 - D5	.51199*	0,17245	0,047	0,0048	1,0192

Post Hoc Tests – Job Levels Multiple Comparisons								
Dependent Variable				Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
CR	Bonferroni	A1 - A3	B1 - B5	-0,17930	0,20225	1,000	-0,7479	0,3893
			C1 - C5	-0,11028	0,19276	1,000	-0,6522	0,4316
			D1 - D5	0,01448	0,19426	1,000	-0,5316	0,5606
			E1 - E3	-0,15652	0,26853	1,000	-0,9114	0,5984
		B1 - B5	A1 - A3	0,17930	0,20225	1,000	-0,3893	0,7479
			C1 - C5	0,06902	0,07714	1,000	-0,1478	0,2859
			D1 - D5	0,19378	0,08082	0,166	-0,0334	0,4210
			E1 - E3	0,02278	0,20225	1,000	-0,5458	0,5914
		C1 - C5	A1 - A3	0,11028	0,19276	1,000	-0,4316	0,6522
			B1 - B5	-0,06902	0,07714	1,000	-0,2859	0,1478
			D1 - D5	0,12476	0,05276	0,182	-0,0236	0,2731
			E1 - E3	-0,04624	0,19276	1,000	-0,5881	0,4957
		D1 - D5	A1 - A3	-0,01448	0,19426	1,000	-0,5606	0,5316
			B1 - B5	-0,19378	0,08082	0,166	-0,4210	0,0334
			C1 - C5	-0,12476	0,05276	0,182	-0,2731	0,0236
			E1 - E3	-0,17100	0,19426	1,000	-0,7171	0,3751
		E1 - E3	A1 - A3	0,15652	0,26853	1,000	-0,5984	0,9114
			B1 - B5	-0,02278	0,20225	1,000	-0,5914	0,5458
			C1 - C5	0,04624	0,19276	1,000	-0,4957	0,5881
			D1 - D5	0,17100	0,19426	1,000	-0,3751	0,7171
	Games-Howell	A1 - A3	B1 - B5	-0,17930	0,19898	0,894	-0,7585	0,3999
			C1 - C5	-0,11028	0,18955	0,976	-0,6698	0,4492
			D1 - D5	0,01448	0,19125	1,000	-0,5485	0,5774
			E1 - E3	-0,15652	0,22595	0,957	-0,8027	0,4897
		B1 - B5	A1 - A3	0,17930	0,19898	0,894	-0,3999	0,7585

Post Hoc Tests – Job Levels
Multiple Comparisons

Dependent Variable				Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
			C1 - C5	0,06902	0,07655	0,896	-0,1413	0,2793
			D1 - D5	0,19378	0,08066	0,117	-0,0276	0,4151
			E1 - E3	0,02278	0,14486	1,000	-0,3928	0,4384
		C1 - C5	A1 - A3	0,11028	0,18955	0,976	-0,4492	0,6698
			B1 - B5	-0,06902	0,07655	0,896	-0,2793	0,1413
			D1 - D5	0,12476	0,05331	0,133	-0,0209	0,2704
			E1 - E3	-0,04624	0,13161	0,997	-0,4327	0,3402
		D1 - D5	A1 - A3	-0,01448	0,19125	1,000	-0,5774	0,5485
			B1 - B5	-0,19378	0,08066	0,117	-0,4151	0,0276
			C1 - C5	-0,12476	0,05331	0,133	-0,2704	0,0209
			E1 - E3	-0,17100	0,13404	0,708	-0,5625	0,2205
		E1 - E3	A1 - A3	0,15652	0,22595	0,957	-0,4897	0,8027
			B1 - B5	-0,02278	0,14486	1,000	-0,4384	0,3928
			C1 - C5	0,04624	0,13161	0,997	-0,3402	0,4327
			D1 - D5	0,17100	0,13404	0,708	-0,2205	0,5625
WE	Bonferroni	A1 - A3	B1 - B5	-0,33138	0,23048	1,000	-0,9793	0,3166
			C1 - C5	-0,17131	0,21966	1,000	-0,7889	0,4462
			D1 - D5	0,03043	0,22137	1,000	-0,5919	0,6528
			E1 - E3	0,55072	0,30601	0,721	-0,3096	1,4110
		B1 - B5	A1 - A3	0,33138	0,23048	1,000	-0,3166	0,9793
			C1 - C5	0,16007	0,08791	0,688	-0,0871	0,4072
			D1 - D5	.36181*	0,09210	0,001	0,1029	0,6207
			E1 - E3	.88211*	0,23048	0,001	0,2342	1,5301
		C1 - C5	A1 - A3	0,17131	0,21966	1,000	-0,4462	0,7889
			B1 - B5	-0,16007	0,08791	0,688	-0,4072	0,0871

Post Hoc Tests – Job Levels Multiple Comparisons								
Dependent Variable				Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
			D1 - D5	.20174*	0,06012	0,008	0,0327	0,3708
			E1 - E3	.72204*	0,21966	0,010	0,1045	1,3396
		D1 - D5	A1 - A3	-0,03043	0,22137	1,000	-0,6528	0,5919
			B1 - B5	-.36181*	0,09210	0,001	-0,6207	-0,1029
			C1 - C5	-.20174*	0,06012	0,008	-0,3708	-0,0327
			E1 - E3	0,52030	0,22137	0,189	-0,1021	1,1427
		E1 - E3	A1 - A3	-0,55072	0,30601	0,721	-1,4110	0,3096
			B1 - B5	-.88211*	0,23048	0,001	-1,5301	-0,2342
			C1 - C5	-.72204*	0,21966	0,010	-1,3396	-0,1045
			D1 - D5	-0,52030	0,22137	0,189	-1,1427	0,1021
	Games-Howell	A1 - A3	B1 - B5	-0,33138	0,22425	0,585	-0,9853	0,3225
			C1 - C5	-0,17131	0,21516	0,929	-0,8062	0,4636
			D1 - D5	0,03043	0,21669	1,000	-0,6076	0,6684
			E1 - E3	0,55072	0,27612	0,286	-0,2356	1,3371
		B1 - B5	A1 - A3	0,33138	0,22425	0,585	-0,3225	0,9853
			C1 - C5	0,16007	0,08361	0,312	-0,0695	0,3897
			D1 - D5	.36181*	0,08747	0,000	0,1218	0,6018
			E1 - E3	.88211*	0,19220	0,001	0,3249	1,4393
		C1 - C5	A1 - A3	0,17131	0,21516	0,929	-0,4636	0,8062
			B1 - B5	-0,16007	0,08361	0,312	-0,3897	0,0695
			D1 - D5	.20174*	0,06047	0,008	0,0365	0,3670
			E1 - E3	.72204*	0,18151	0,005	0,1875	1,2565
		D1 - D5	A1 - A3	-0,03043	0,21669	1,000	-0,6684	0,6076
			B1 - B5	-.36181*	0,08747	0,000	-0,6018	-0,1218
			C1 - C5	-.20174*	0,06047	0,008	-0,3670	-0,0365

Post Hoc Tests – Job Levels Multiple Comparisons								
Dependent Variable				Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
			E1 - E3	0,52030	0,18332	0,062	-0,0179	1,0585
		E1 - E3	A1 - A3	-0,55072	0,27612	0,286	-1,3371	0,2356
			B1 - B5	-.88211*	0,19220	0,001	-1,4393	-0,3249
			C1 - C5	-.72204*	0,18151	0,005	-1,2565	-0,1875
			D1 - D5	-0,52030	0,18332	0,062	-1,0585	0,0179
EB	Bonferroni	A1 - A3	B1 - B5	-0,24460	0,19439	1,000	-0,7911	0,3019
			C1 - C5	0,16294	0,18527	1,000	-0,3579	0,6838
			D1 - D5	.57811*	0,18671	0,020	0,0532	1,1030
			E1 - E3	.80435*	0,25810	0,019	0,0787	1,5299
		B1 - B5	A1 - A3	0,24460	0,19439	1,000	-0,3019	0,7911
			C1 - C5	.40754*	0,07414	0,000	0,1991	0,6160
			D1 - D5	.82271*	0,07768	0,000	0,6043	1,0411
			E1 - E3	1.04894*	0,19439	0,000	0,5025	1,5954
		C1 - C5	A1 - A3	-0,16294	0,18527	1,000	-0,6838	0,3579
			B1 - B5	-.40754*	0,07414	0,000	-0,6160	-0,1991
			D1 - D5	.41517*	0,05071	0,000	0,2726	0,5577
			E1 - E3	.64141*	0,18527	0,006	0,1206	1,1623
		D1 - D5	A1 - A3	-.57811*	0,18671	0,020	-1,1030	-0,0532
			B1 - B5	-.82271*	0,07768	0,000	-1,0411	-0,6043
			C1 - C5	-.41517*	0,05071	0,000	-0,5577	-0,2726
			E1 - E3	0,22624	0,18671	1,000	-0,2987	0,7511
		E1 - E3	A1 - A3	-.80435*	0,25810	0,019	-1,5299	-0,0787
			B1 - B5	-1.04894*	0,19439	0,000	-1,5954	-0,5025
			C1 - C5	-.64141*	0,18527	0,006	-1,1623	-0,1206
			D1 - D5	-0,22624	0,18671	1,000	-0,7511	0,2987

Post Hoc Tests – Job Levels Multiple Comparisons								
Dependent Variable				Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
	Games-Howell	A1 - A3	B1 - B5	-0,24460	0,19429	0,718	-0,8104	0,3212
			C1 - C5	0,16294	0,18563	0,902	-0,3848	0,7107
			D1 - D5	.57811*	0,18602	0,035	0,0296	1,1266
			E1 - E3	.80435*	0,23390	0,011	0,1378	1,4709
		B1 - B5	A1 - A3	0,24460	0,19429	0,718	-0,3212	0,8104
			C1 - C5	.40754*	0,07468	0,000	0,2024	0,6127
			D1 - D5	.82271*	0,07565	0,000	0,6150	1,0304
			E1 - E3	1.04894*	0,16071	0,000	0,5845	1,5134
		C1 - C5	A1 - A3	-0,16294	0,18563	0,902	-0,7107	0,3848
			B1 - B5	-.40754*	0,07468	0,000	-0,6127	-0,2024
			D1 - D5	.41517*	0,04932	0,000	0,2804	0,5499
			E1 - E3	.64141*	0,15013	0,002	0,1997	1,0831
		D1 - D5	A1 - A3	-.57811*	0,18602	0,035	-1,1266	-0,0296
			B1 - B5	-.82271*	0,07565	0,000	-1,0304	-0,6150
			C1 - C5	-.41517*	0,04932	0,000	-0,5499	-0,2804
			E1 - E3	0,22624	0,15061	0,571	-0,2165	0,6689
		E1 - E3	A1 - A3	-.80435*	0,23390	0,011	-1,4709	-0,1378
			B1 - B5	-1.04894*	0,16071	0,000	-1,5134	-0,5845
			C1 - C5	-.64141*	0,15013	0,002	-1,0831	-0,1997
			D1 - D5	-0,22624	0,15061	0,571	-0,6689	0,2165
JS	Bonferroni	A1 - A3	B1 - B5	-0,03195	0,20521	1,000	-0,6089	0,5450
			C1 - C5	-0,01929	0,19558	1,000	-0,5691	0,5306
			D1 - D5	-0,23488	0,19711	1,000	-0,7890	0,3192
			E1 - E3	-0,36232	0,27247	1,000	-1,1283	0,4037
		B1 - B5	A1 - A3	0,03195	0,20521	1,000	-0,5450	0,6089

Post Hoc Tests – Job Levels
Multiple Comparisons

Dependent Variable				Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
			C1 - C5	0,01267	0,07827	1,000	-0,2074	0,2327
			D1 - D5	-0,20293	0,08200	0,134	-0,4335	0,0276
			E1 - E3	-0,33037	0,20521	1,000	-0,9073	0,2465
		C1 - C5	A1 - A3	0,01929	0,19558	1,000	-0,5306	0,5691
			B1 - B5	-0,01267	0,07827	1,000	-0,2327	0,2074
			D1 - D5	-.21560*	0,05353	0,001	-0,3661	-0,0651
			E1 - E3	-0,34303	0,19558	0,797	-0,8929	0,2068
		D1 - D5	A1 - A3	0,23488	0,19711	1,000	-0,3192	0,7890
			B1 - B5	0,20293	0,08200	0,134	-0,0276	0,4335
			C1 - C5	.21560*	0,05353	0,001	0,0651	0,3661
			E1 - E3	-0,12744	0,19711	1,000	-0,6816	0,4267
		E1 - E3	A1 - A3	0,36232	0,27247	1,000	-0,4037	1,1283
			B1 - B5	0,33037	0,20521	1,000	-0,2465	0,9073
			C1 - C5	0,34303	0,19558	0,797	-0,2068	0,8929
			D1 - D5	0,12744	0,19711	1,000	-0,4267	0,6816
	Games-Howell	A1 - A3	B1 - B5	-0,03195	0,25691	1,000	-0,7828	0,7189
			C1 - C5	-0,01929	0,24708	1,000	-0,7499	0,7113
			D1 - D5	-0,23488	0,24732	0,874	-0,9660	0,4962
			E1 - E3	-0,36232	0,29992	0,747	-1,2193	0,4946
		B1 - B5	A1 - A3	0,03195	0,25691	1,000	-0,7189	0,7828
			C1 - C5	0,01267	0,08605	1,000	-0,2239	0,2492
			D1 - D5	-0,20293	0,08676	0,136	-0,4413	0,0355
			E1 - E3	-0,33037	0,19056	0,429	-0,8812	0,2205
		C1 - C5	A1 - A3	0,01929	0,24708	1,000	-0,7113	0,7499
			B1 - B5	-0,01267	0,08605	1,000	-0,2492	0,2239

Post Hoc Tests – Job Levels Multiple Comparisons								
Dependent Variable				Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
			D1 - D5	-.21560*	0,05069	0,000	-0,3541	-0,0771
			E1 - E3	-0,34303	0,17707	0,326	-0,8650	0,1789
		D1 - D5	A1 - A3	0,23488	0,24732	0,874	-0,4962	0,9660
			B1 - B5	0,20293	0,08676	0,136	-0,0355	0,4413
			C1 - C5	.21560*	0,05069	0,000	0,0771	0,3541
			E1 - E3	-0,12744	0,17742	0,950	-0,6501	0,3952
		E1 - E3	A1 - A3	0,36232	0,29992	0,747	-0,4946	1,2193
			B1 - B5	0,33037	0,19056	0,429	-0,2205	0,8812
			C1 - C5	0,34303	0,17707	0,326	-0,1789	0,8650
			D1 - D5	0,12744	0,17742	0,950	-0,3952	0,6501
***. The mean difference is significant at the 0.05 level.**								

ANNEXURE 14: ETHICAL CLEARANCE

The ethical clearance forms are available on request.

ANNEXURE 15: TURNITIN REPORT SUMMARY

The Turnitin report summary is available on request.